

**APPENDIX C**  
**CONSENT ORDER**

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JUL 17 1996

JoAnne McBride, Clerk, Clark Co.

IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON  
FOR THE COUNTY OF CLARK

STATE OF WASHINGTON,  
DEPARTMENT OF ECOLOGY,

Plaintiff,

v.

LEICHNER BROTHERS LAND  
RECLAMATION CORPORATION,

Defendant.

96 2 03081 7  
NO.

CONSENT DECREE

CONSENT DECREE

ATTORNEY GENERAL OF WASHINGTON  
Ecology Division  
PO Box 40117  
Olympia, WA 98504-0117  
FAX (360) 438-7743

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9           B.       The Complaint in this action is being filed simultaneously with this Decree.  
10   An answer has not been filed, and there has not been a trial on any issue of fact or law in  
11   this case. However, the Parties wish to resolve the issues raised by Ecology's complaint.  
12   In addition, the Parties agree that settlement of these matters without litigation is reasonable  
13   and in the public interest and that entry of this Decree is the most appropriate means of  
14   resolving these matters.

17 D. By entering into this Decree, the Parties do not intend to discharge  
18 nonsettling Parties from any liability they may have with respect to matters alleged in the  
19 complaint. Leichner and Ecology retain the right to seek reimbursement; in whole or in  
20 part from any responsible entities for sums expended for remedial action at the Site.

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1 F. The Court is fully advised of the reasons for entry of this Decree, and good  
2 cause having been shown:

3 IT IS HEREBY ORDERED, ADJUDGED, AND DECREED AS FOLLOWS:

4 **I. JURISDICTION**

5 A. This Court has jurisdiction over the subject matter and over the Parties  
6 pursuant to chapter 70.105D RCW, the Model Toxics Control Act (MTCA). Venue is  
7 properly laid in Clark County, the location of the property at issue.

8 B. Authority is conferred upon the State of Washington Attorney General by  
9 RCW 70.105D.040(4)(a) to agree to a settlement with any potentially liable party if, after  
10 public notice and hearing, Ecology finds the proposed settlement would lead to a more  
11 expeditious cleanup of hazardous substances in compliance with cleanup standards under  
12 RCW 70.105D.030(2)(d). RCW 70.105D.040(4)(b) requires that such a settlement be  
13 entered as a consent decree issued by a court of competent jurisdiction.

14 C. Ecology has given notice to Leichner, as provided in RCW 70.105D.020(15),  
15 of Ecology's determination that Leichner is a potentially liable person with respect to the  
16 Site and that there has been a release or threatened release of hazardous substances at the  
17 Site.

18 D. Ecology has determined that past activities at the Site have given rise to a  
19 release of hazardous substances, which requires remedial action pursuant to chapter  
20 70.105D RCW.

21 E. The actions to be taken pursuant to this Decree are necessary to protect the  
22 public health, welfare, and the environment.

23 F. By entering into this Decree, Leichner agrees not to challenge the jurisdiction  
24 of Ecology in any proceeding to enforce this Decree. Leichner has agreed to voluntarily  
25 undertake the actions specified in this Decree and consents to the issuance of this Decree,  
26 pursuant to chapter 70.105D RCW.

## II. PARTIES BOUND

This Decree shall apply to and be binding upon the signatories to this Decree (Parties), their successors and assigns. The undersigned representative of each party hereby certifies that he or she is fully authorized to enter into this Decree and to execute and legally bind such party to comply with the Decree. Leichner agrees to undertake all actions required by the terms and conditions of this Decree and not to contest state jurisdiction in any proceeding to enforce this Decree. No change in ownership or corporate status shall alter the responsibility of Leichner under this Decree. Leichner shall make a copy of this Decree available to each of its agents, including all contractors and subcontractors retained to perform work contemplated by this Decree, and shall condition any contract for such work on compliance with this Decree.

## III. DEFINITIONS

A. Decree: Refers to this Consent Decree and each of the exhibits to the Decree. All exhibits are integral and enforceable parts of this Consent Decree.

B. Parties: Refers to the Washington State Department of Ecology or its successor and Leichner Brothers Land Reclamation Corporation.

C. Site: Refers to the Leichner Brothers Land Reclamation Corporation landfill located near Vancouver, Washington and surrounding areas where hazardous substances have come to be located. The Site is more particularly described in Exhibit A to this Decree, which is a detailed site diagram. By this reference, Exhibit A is incorporated into this Decree.

D. Non-privileged: Refers to documents not protected by any evidentiary privilege recognized under Washington or federal law.

E. Unless otherwise specified, the definitions set forth in WAC 173-340-200 control the meaning of the terms used in this Decree.





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**VI. ROLE OF HEALTH DISTRICT**

A. The Southwest Washington Health District has regulated the operation and closure of the Site under the state Solid Waste Management Act, chapter 70.95 RCW, and its implementing regulations. The Health District intends to issue a post-closure permit for the Landfill, which will require groundwater monitoring, surface water monitoring, gas monitoring, and maintenance of the facility, facility structures, and monitoring systems.

B. Because of the Health District's familiarity with and expertise relative to this Site, Ecology will delegate certain of its duties under this Decree to the District. Among other duties, the Health District will review quarterly groundwater monitoring data submitted by Lechner. Ecology and the Health District will enter into a Memorandum of Understanding that describes in greater detail the duties that the Health District will perform in the implementation of this Decree. Despite this delegation, Ecology remains responsible for ensuring compliance with the terms of the Decree.

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**VII. DESIGNATED PROJECT COORDINATORS**

A. On or before the entry of this Decree, Ecology and Lechner shall each designate a project coordinator. Each project coordinator shall be responsible for overseeing the implementation of this Decree. To the maximum extent possible, communications between the Parties and all documents, including reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Decree, shall be directed through the project coordinators. The project coordinators may designate, in writing, working level staff contacts for all or portions of the implementation of the remedial action required by this Decree.

B. Any party may change its project coordinator. Written notification shall be given to the other party, in writing, at least ten (10) days prior to the change.

1 C. The project coordinator for Ecology is:

2 Rebecca Lawson, P.E.  
3 510 Desmond Drive  
4 P.O. Box 47775  
5 Olympia, WA 98504-7775  
6 Phone: (360) 407-6255  
7 FAX: (360) 407-6305

8 D. The project coordinators for Leichner are:

9 Kevin Lakey  
10 EMCON  
11 18912 North Creek Parkway  
12 Suite 100  
13 Bothell, WA 98011  
14 Phone: (206) 485-5000  
15 FAX: (206) 486-9766

16 Craig Leichner  
17 Leichner Brothers Land Reclamation Corp.  
18 9411 NE 946th Avenue  
19 Vancouver, WA 98666  
20 Phone: (360) 892-9594  
21 FAX: (360) 892-8471

#### 22 VIII. PERFORMANCE

23 All work performed pursuant to this Decree shall be under the direction and  
24 supervision, as necessary, of a professional engineer registered with the State of  
25 Washington or certified hydrogeologist, or equivalent, with experience and expertise in  
26 hazardous waste site investigation and cleanup. Leichner shall notify Ecology in writing of  
the identity of such engineer(s) or hydrogeologist(s), and of any contractors and  
subcontractors to be used in carrying out the terms of this Decree, in advance of their  
involvement at the Site. Such notice shall include a summary of the qualifications of each  
engineer, hydrogeologist, contractor, and subcontractor.

#### IX. ACCESS

Within twenty-four (24) hours of receiving a request for access, Leichner shall  
provide Ecology, the Health District, and their authorized representatives, entry and access  
to all property at the Site at all reasonable times for the purposes of, among other things:

1 inspecting non-privileged records, operation logs, contracts, plans, specifications,  
2 engineering designs, files, photographs, documents, and other writings, including all  
3 sampling and monitoring data, related to remedial action being performed pursuant to this  
4 Decree; reviewing the progress in carrying out the terms of this Decree; conducting tests or  
5 collecting samples as Ecology or the Health District may deem necessary; using a camera,  
6 sound recording, or other documentary type equipment to record work done pursuant to this  
7 Decree; and verifying the data submitted to the Health District and Ecology by Leichner.  
8 Leichner shall permit any Ecology- or Health District-authorized representative to copy all  
9 non-privileged records, files, photographs, documents, and other writings related to  
10 remedial action performed pursuant to this Decree, whether located at the Site or  
11 elsewhere. All Parties with access to property at the Site pursuant to this paragraph shall  
12 comply with approved safety and health plans. Should Leichner fail at any time to provide  
13 Ecology or the Health District access under the terms set forth above, then Leichner shall  
14 immediately provide to Ecology and the Health District keys allowing access to the Site,  
15 including locked well covers at the Site. Provided, however, that except in an emergency,  
16 Ecology and the Health District shall still be required to provide Leichner twenty-four (24)  
17 hours notice prior to entry onto the Site.

18 **X. SAMPLING, DATA REPORTING AND AVAILABILITY**

19 A. Leichner shall make the quality assured results of all sampling, laboratory  
20 reports, and test results generated by it or on its behalf pursuant to this Decree available to  
21 the Health District and Ecology. Leichner shall submit quality-assured results or, upon  
22 request, raw data, in periodic progress reports as provided in Section XI. of this Decree.

23 B. Leichner shall allow Ecology or its authorized representative to take splits  
24 or duplicates of any samples collected by Leichner pursuant to this Decree. Except in cases  
25 of emergency, Leichner shall notify Ecology five (5) working days in advance of any  
26 sample collection at the Site not scheduled in the compliance monitoring plan. In cases of

1 emergency, Leichner shall notify Ecology as soon as possible (and prior to sampling, if  
2 practical) of the nature of the emergency and of the type of samples collected. Ecology  
3 shall, upon request, allow Leichner or its authorized representative to take splits or  
4 duplicates of any samples collected by either of them pursuant to this Decree. All sampling  
5 shall be conducted in accordance with the approved sampling and analysis plans. To the  
6 extent practicable, and without limitation on Ecology's rights under Section IX, Ecology  
7 shall endeavor to notify Leichner five (5) days prior to any planned sample collection  
8 activity.

#### 9 **XI. PROGRESS REPORTS**

10 Leichner shall submit to Ecology and the Health District periodic written progress  
11 reports that describe the actions taken during the reporting period to implement the  
12 requirements of this Decree. The progress reports shall include detailed documentation of  
13 any activity conducted on-site, including all quality-assured data and, if requested, raw data  
14 received by Leichner during the previous reporting period. All progress reports shall be  
15 submitted by the tenth day of the reporting period in which they are due after the effective  
16 date of this Decree. Progress reports shall be submitted on a frequency set forth in the  
17 approved compliance monitoring plan. Unless otherwise specified, progress reports and  
18 any other documents submitted pursuant to this Decree shall be sent by U.S. mail to  
19 Ecology's project coordinator at the address given in Section VI.

#### 20 **XII. RETENTION OF RECORDS**

21 Leichner shall preserve, for the duration of this Decree and for ten (10) years from  
22 the date of issuance of the notice as provided in Section XXIX, all records, reports,  
23 documents, and underlying data in its possession relevant to the implementation of this  
24 Decree, and shall insert in contracts with project contractors the same record retention  
25 requirement. Upon request by Ecology, Leichner shall make all non-privileged records  
26 available to Ecology and shall allow access for review of non-privileged, non-archived

1 documents. Archived non-privileged documents shall be made available within a reasonable  
2 time.

3 **XIII. TRANSFER OF INTEREST IN PROPERTY**

4 A. No voluntary conveyance or relinquishment of title, easement, leasehold, or  
5 other interest in any portion of the Site may be consummated without provision for  
6 continued operation and maintenance of any containment system, treatment system, and  
7 monitoring system installed or implemented pursuant to this Decree.

8 B. Prior to transfer of any legal or equitable interest in all or any portion of the  
9 Site, Leichner shall serve a copy of this Decree, including all exhibits, upon any  
10 prospective purchaser, lessee, transferee, assignee, or other successor in interest of the  
11 property; and, at least thirty (30) days prior to any transfer, Leichner shall notify Ecology  
12 of said contemplated transfer. The Parties acknowledge that Leichner has entered into an  
13 option agreement with Clark County to convey that property within the Site (as more  
14 specifically described in Exhibit D, attached hereto and by this reference incorporated  
15 herein) to Clark County at Clark County's option, upon issuance by the Health District of a  
16 certificate of completion of post-closure pursuant to WAC 173-304-407(7)(c). The parties  
17 acknowledge that the Disposal Group, a group of solid waste collection companies affiliated  
18 with Leichner currently operating in Clark County, has used part of the Site for activities  
19 related to the collection of solid waste in Clark County. The parties further acknowledge  
20 that Leichner intends to lease a portion of the Site to BFI, a solid waste management  
21 company, to be used for collection company activities of the same sort conducted by the  
22 Disposal Group. The parties further acknowledge that Leichner has sold a portion of the  
23 Site to Air, Water and Earth, a recycling company. No further notice to Ecology is  
24 required for these transactions.

1 **XIV. RESOLUTION OF DISPUTES**

2 A. If Leichner objects to any Ecology disapproval, proposed modification, or  
3 decision made pursuant to this Decree, it shall notify Ecology in writing of its objections  
4 within fourteen (14) days after receipt of notice of such disapproval, proposed modification,  
5 or decision. Thereafter, the Parties' project coordinators shall confer in an effort to resolve  
6 the dispute. If agreement on the dispute is not reached within fourteen (14) days after  
7 receipt by Ecology of such objections, Ecology's project coordinator shall promptly provide  
8 a written statement of its decision to Leichner.

9 B. Leichner may then request Ecology management review of the decision.  
10 This request shall be submitted in writing to the Toxics Cleanup Program Manager within  
11 seven (7) days of receipt of Ecology's project coordinator's decision. Ecology's Program  
12 Manager shall review the dispute and shall issue a written decision regarding the dispute  
13 within thirty (30) days of Leichner's request for review. The Program Manager's decision  
14 shall be Ecology's final decision on the disputed matter.

15 C. If Ecology's final written decision is unacceptable to Leichner, Leichner may  
16 submit the dispute to the Court for resolution. The Parties agree that one judge should  
17 retain jurisdiction over this case and shall, as necessary, resolve any dispute arising under  
18 this Decree.

19 D. If the dispute that Leichner submits to the Court involves an investigative or  
20 remedial decision of Ecology under RCW 70.105D.030 or 70.105D.050, then the Court  
21 shall review such decision on the basis of whether it was arbitrary and capricious, and shall  
22 render a decision based on such standard of review. If the dispute that Leichner submits to  
23 the Court involves the interpretation of this Decree or of statute or regulation, then the  
24 Court shall afford Ecology's interpretation the deference to which it is entitled under law,  
25 and shall render a decision accordingly.  
26

1 E. Ecology and Leichner agree to utilize the dispute resolution process only in  
2 good faith and agree to expedite, to the extent possible, the dispute resolution process  
3 whenever it is used. Where either party utilizes the dispute resolution process in bad faith  
4 or for purposes of delay, the other party may seek sanctions.

5 F. Leichner may request an extension of schedule under Section XVI, Extension  
6 of Schedule, for any activity that is the subject of dispute resolution proceedings under this  
7 section.

#### 8 XV. AMENDMENT OF CONSENT DECREE

9 A. This Decree may be amended only by a written stipulation between the Parties  
10 to this Decree that is entered by the Court or by order of the Court. Such amendment shall  
11 become effective upon entry by the Court. Agreement to amend shall not be unreasonably  
12 withheld by any party to the Decree. If the amendment to the Decree is substantial,  
13 Ecology will provide public notice and opportunity for comment.

14 B. Leichner shall submit any request for an amendment to Ecology for approval.  
15 Leichner's request shall refer to this section of the Decree, and shall notify Ecology that a  
16 response is due within the time periods specified in this paragraph. Ecology shall respond  
17 to the request within twenty-one (21) days after the request for amendment is received. In  
18 its response, Ecology shall either approve the request, disapprove the request, or specify a  
19 date by which Leichner may expect to receive an approval or disapproval. The date  
20 specified by Ecology shall be no more than forty-five (45) days after Ecology's receipt of  
21 Leichner's request, unless the parties agree to a longer period. Reasons for disapproval  
22 shall be stated in writing. If Ecology disapproves any proposed amendment, the  
23 disagreement may be addressed through the dispute resolution procedures described in  
24 Section XIV of this Decree.

25 C. No guidance, suggestions, or comments by Ecology may be construed as  
26 relieving Leichner of its obligation to obtain formal approval as may be required by this

1 Decree. No oral communication from Ecology staff may relieve Leichner of the obligation  
2 specified herein.

3 D. Ecology shall notify Leichner in writing of any Ecology-proposed amendment  
4 and the basis for such proposal. Leichner shall thereafter comply with such modifications,  
5 or if it does not agree with those modifications, the disagreement shall be addressed through  
6 the dispute resolution procedures described in Section XIV of this Decree.

7 **XVI. EXTENSION OF SCHEDULE**

8 A. An extension of schedule may be granted only when a request for an  
9 extension is submitted in a timely fashion and good cause exists for granting the extension.  
10 All extensions shall be requested in writing. The request shall specify the reason(s) the  
11 extension is needed. A requested extension shall not be effective until approved by Ecology  
12 or the Court. Ecology shall act upon any written request for extension in a timely fashion.  
13 It shall not be necessary to formally amend this Decree pursuant to Section XV when a  
14 schedule extension is granted.

15 B. The burden shall be on Leichner to demonstrate to the satisfaction of Ecology  
16 that the request for extension has been submitted in a timely fashion and that good cause  
17 exists for granting the extension. Good cause includes, but is not limited to, the following:

18 (1) Circumstances beyond the reasonable control and despite the due  
19 diligence of Leichner, including delays caused by unrelated third Parties or by Ecology,  
20 such as delays by Ecology in reviewing, approving, or modifying documents submitted by  
21 Leichner; or

22 (2) Acts of God, including earthquake, fire, flood, blizzard, extreme  
23 temperatures, storm, abnormal wave or water conditions, or other unavoidable casualty; or

24 (3) Endangerment as described in Section XVII.  
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1 However, neither increased costs of performance of the terms of this Decree nor changed  
2 economic circumstances shall be considered circumstances beyond the reasonable control of  
3 Leichner.

4 C. An extension may be granted only for such period of time as Ecology  
5 determines is reasonable under the circumstances. This period may not exceed ninety (90)  
6 days, except that a longer extension may be granted where an extension is needed as a  
7 result of:

8 (1) Delays in the issuance of a necessary permit that was applied for in a  
9 timely manner; or

10 (2) Other circumstances deemed exceptional or extraordinary by Ecology;  
11 or

12 (3) Endangerment as described in Section XVII; or

13 (4) The need to protect the environment or public interest.

14 D. Ecology shall give Leichner written notice in a timely fashion of any  
15 extensions granted pursuant to the Decree.

#### 16 XVII. ENDANGERMENT

17 A. If Ecology determines or concurs in a determination by another local, state,  
18 or federal agency that activities implementing or in compliance with this Decree, or any  
19 other circumstances or activities, are creating or have the potential to create a danger to the  
20 health or welfare of the people on the Site or in the surrounding area or to the environment,  
21 Ecology may order Leichner to stop further implementation of this Decree for such period  
22 of time as needed to abate the danger, or may petition the Court for an appropriate order.  
23 During any stoppage of work under this section, the obligations of Leichner with respect to  
24 the work ordered to be stopped shall be suspended, and the time periods for performance of  
25 that work, as well as the time period for any other work dependent upon the work that is  
26

1 stopped, shall be extended, pursuant to Section XVI of this Decree, for such period of time  
2 as Ecology determines is reasonable under the circumstances.

3 B. If Leichner determines that activities undertaken in furtherance of this Decree  
4 or any other circumstances or activities are creating or have the potential to create a danger  
5 to the people on the Site or in the surrounding area or to the environment, Leichner may  
6 stop implementation of this Decree for such period of time necessary for Ecology to  
7 evaluate the situation and to determine whether Leichner should proceed with  
8 implementation of the Decree, or whether the work stoppage should continue until the  
9 danger is abated. Leichner shall notify either Ecology field personnel on-site or the project  
10 coordinator as soon as possible, but no later than twenty-four (24) hours after such stoppage  
11 of work, and shall provide Ecology with documentation of its analysis in reaching this  
12 determination. If Ecology disagrees with Leichner's determination, it may direct Leichner  
13 to resume implementation of this Decree. If Ecology concurs in the work stoppage,  
14 Leichner's obligations shall be suspended and the time period for performance of that work,  
15 as well as the time period for any other work dependent upon the work which was stopped,  
16 shall be extended, pursuant to Section XVI of this Decree, for such period of time as  
17 Ecology determines is reasonable under the circumstances. Any disagreements pursuant to  
18 this clause shall be resolved through the dispute resolution procedures in Section XIV.

19 **XVIII. COVENANT NOT TO SUE**

20 A. In consideration of Leichner's compliance with the terms and conditions of  
21 this Decree, the state agrees that compliance with this Decree shall stand in lieu of any and  
22 all administrative, legal, and equitable remedies and enforcement actions available to the  
23 state against Leichner for the release or threatened release of hazardous substances covered  
24 by the terms of this Decree.

25 B. This covenant is strictly limited in its application to the Site specifically  
26 defined in Exhibit A and to those hazardous substances that Ecology knows to be located at

1 the Site as of the date of entry of this Decree. This covenant is not applicable to any other  
2 hazardous substance or area and the state retains all of its authority relative to such  
3 substances and areas.

4 C. In the following circumstances the State of Washington may exercise its full  
5 legal authority to address releases of hazardous substances at the Site notwithstanding the  
6 Covenant Not to Sue set forth above:

- 7 (1) If Leichner fails to comply with the terms and conditions of this  
8 Decree, including all exhibits, and, after written notice of  
9 noncompliance, fails to come into compliance immediately;
- 10 (2) If factors not known at the time of entry of this Decree, including  
11 factors listed in WAC 173-340-420(2), are discovered and Ecology  
12 determines, in light of these factors, that further remedial action is  
13 necessary at the Site to protect human health or the environment, and  
14 Leichner, after notice, fails to take the necessary action within a  
15 reasonable time; or
- 16 (3) If conditions at the Site cause an endangerment to human health or the  
17 environment under Section XVII. of this Consent Decree, and  
18 Leichner, after notice, fails to eliminate the endangerment within a  
19 reasonable time.

20 D. The Covenant Not to Sue set forth above shall have no applicability  
21 whatsoever to:

- 22 (4) Criminal liability;
- 23 (5) Liability for damages to natural resources;
- 24 (6) Any Ecology action against potentially liable persons not a party to  
25 this Decree.  
26

1 **XIX. LAND USE RESTRICTIONS**

2       Leichner agrees that the restrictive covenant, attached hereto as Exhibit C and by  
3 this reference incorporated herein, shall be recorded with the office of the Clark County  
4 Auditor within 10 days of the entry of this Decree and shall restrict future uses of the Site.  
5 After completion of the remedial action required by this Decree, and when the criteria in  
6 WAC 173-340-440 are met, the Health District may recommend to Ecology that the  
7 restrictive covenant be removed. With Ecology's prior written approval, Leichner, or its  
8 successor(s), may record an instrument that provides that the restrictive covenant provided  
9 in Exhibit C shall no longer limit uses of the Site or be of any further force or effect.

10 **XX. INDEMNIFICATION**

11       Leichner agrees to indemnify and save and hold the State of Washington, the Health  
12 District, their employees, and agents harmless from any and all claims or causes of action  
13 for death or injuries to persons or for loss or damage to property arising from or on  
14 account of acts or omissions of Leichner, its officers, employees, agents, or contractors in  
15 entering into and implementing this Decree. However, Leichner shall not indemnify the  
16 State of Washington nor save nor hold its employees and agents harmless from any claims  
17 or causes of action arising out of the negligent acts or omissions of the State of  
18 Washington, or the employees or agents of the state, in implementing the activities pursuant  
19 to this Decree. Nor shall Leichner indemnify the Health District nor save nor hold its  
20 employees and agents harmless from any claims or causes of action arising out of the  
21 negligent acts or omissions of the Health District, or the employees or agents of the Health  
22 District, in implementing the activities pursuant to this Decree.

23 **XXI. COMPLIANCE WITH APPLICABLE LAWS**

24       A. All actions carried out by Leichner pursuant to this Decree shall be done in  
25 accordance with all applicable federal, state, and local requirements, including require-  
26 ments, if any, to obtain necessary permits.

1           B.       Pursuant to RCW 70.105D.090(1), the substantive requirements of chapters  
2 70.94, 70.95, 75.20, and 90.58 RCW and of any laws requiring or authorizing local  
3 government permits or approvals for the remedial action under this Decree that are known  
4 to be applicable at the time of entry of the Decree have been included in Exhibit B, the  
5 Cleanup Action Plan, and are binding and enforceable requirements of the Decree.

6           Leichner has a continuing obligation to determine whether additional permits or  
7 approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial  
8 action under this Decree. In the event either Leichner or Ecology determines that  
9 additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be  
10 required for the remedial action under this Decree, it shall promptly notify the other party  
11 of this determination. If Ecology so requires, Leichner shall promptly consult with the  
12 appropriate state and/or local agencies and provide Ecology with written documentation  
13 from those agencies of the substantive requirements those agencies believe are applicable to  
14 the remedial action. Ecology shall make the final determination on the additional  
15 substantive requirements that must be met by Leichner and how Leichner must meet those  
16 requirements. Once established by Ecology, the additional requirements shall be  
17 enforceable requirements of this Decree. Leichner shall not begin or continue remedial  
18 action potentially subject to the additional requirements until Ecology makes its final  
19 determination.

20           Ecology shall ensure that notice and opportunity to comment is provided to the  
21 public and appropriate agencies prior to establishing the substantive requirements under this  
22 section.

23           C.       Pursuant to RCW 70.105D.090(2), in the event Ecology determines that the  
24 exemption from procedural compliance with the laws listed in RCW 70.105D.090(1) would  
25 result in the loss of approval from a federal agency which is necessary for the State to  
26 administer any federal law, the exemption shall not apply, and Leichner shall comply with

1 both the procedural and substantive requirements of the laws referenced in RCW  
2 70.105D.090(1), including any requirements to obtain permits.

3 **XXII. COST REIMBURSEMENT**

4 A. Leichner agrees to pay costs incurred by Ecology pursuant to this Decree.  
5 These costs shall include work performed by Ecology or its contractors for, or on, the Site  
6 under Ch. 70.105D RCW both prior to and subsequent to the issuance of this Decree for  
7 investigations, remedial actions, and Decree preparation, negotiations, oversight and  
8 administration. Ecology costs shall include costs of direct activities and support costs of  
9 direct activities as defined in WAC 173-340-550(2). Leichner agrees to pay the required  
10 amount within ninety (90) days of receiving from Ecology an itemized statement of costs  
11 that includes a summary of costs incurred, an identification of involved staff, and the  
12 amount of time spent by involved staff members on the project. A general statement of  
13 work performed will be provided upon request. Itemized statements shall be prepared  
14 quarterly. Failure to pay Ecology's costs within ninety (90) days of receipt of the itemized  
15 statement will result in interest charges at the rate of twelve percent per annum.

16 B. Leichner shall not be required to pay permit fees under RCW 90.48.465 or  
17 ch. 177-216 WAC because it is already paying Ecology oversight costs pursuant to this  
18 section.

19 **XXIII. CLAIMS AGAINST THE STATE**

20 Leichner hereby agrees that it will not seek to recover any costs incurred in  
21 implementing this Decree from the State of Washington or the Health District. Provided,  
22 however, that this section does not apply to any grant funding that may be available.

23 **XXIV. FINANCIAL ASSURANCES**

24 A. Leichner has submitted to Ecology and the Health District an estimate of the  
25 costs that it will incur in carrying out the terms of this Decree, including operation and  
26 maintenance and compliance monitoring. Within 60 days of Ecology's review and approval

1 of this estimate, Leichner shall provide a copy of the revised Disposal Agreement executed  
2 by Leichner, Clark County and the City of Vancouver that provides financial assurance  
3 sufficient to cover all such costs and a mechanism for payment of the costs, or another  
4 financial assurance mechanism acceptable to Ecology. The agreement will be attached to  
5 this Decree as Exhibit E, and by reference incorporated herein.

6 B. Leichner shall update the estimated cost of performing its obligations under  
7 this Decree every year. If the estimated cost of performance increases beyond the amount  
8 in the fund created by the Disposal Agreement, then the provisions of the Disposal  
9 Agreement addressing shortfalls will be triggered.

#### 10 **XXV. IMPLEMENTATION OF REMEDIAL ACTION**

11 If Ecology determines that Leichner has failed without good cause to implement the  
12 remedial action required by this Decree, Ecology may, after notice to Leichner, perform  
13 any or all portions of the remedial action that remain incomplete.

14 If Ecology performs all or portions of the remedial action because of Leichner's  
15 failure to comply with its obligations under this Decree, Leichner shall reimburse Ecology  
16 for the costs of doing such work within thirty (30) days of receipt of demand for payment  
17 of such costs, provided that the work done is consistent with this Decree. Interest at the  
18 rate of twelve (12) percent per annum will accrue on any costs not reimbursed within thirty  
19 (30) days of receipt of demand for payment.

#### 20 **XXVI. RESERVATION OF RIGHTS**

21 By agreeing to the entry of this Decree, Leichner and Ecology agree to abide by its  
22 terms. Although the Parties believe that the recitals contained in the Decree are accurate,  
23 the execution and performance of the Decree is not, however, an admission by Leichner of  
24 any fact or liability for any purpose other than in proceedings between the Parties regarding  
25 the interpretation or enforcement of this Decree. Leichner's performance under the Decree  
26 does not waive or prejudice its right to raise any claims or defenses, not limited to defenses

1 under RCW 70.105D.040, that may be asserted in the event of further administrative  
2 proceedings or litigation not associated with, or related to, this Decree. Nor is the  
3 execution or the performance of the Decree an agreement by Leichner to take any action at  
4 the Site other than that described in this document.

#### 5 **XXVII. PERIODIC REVIEW**

6 As provided in this section, from time to time during the term of this Decree as  
7 remedial action proceeds at the Site, including but not limited to implementation of the  
8 approved post-closure plans, the Parties agree to review all data accumulated as a result of  
9 site monitoring. Periodic review shall occur at a minimum at least every five years during  
10 the term of this Decree. During the periodic review, Ecology and Leichner shall conduct a  
11 review of the status of the remedial action at the Site and the need, if any, for further  
12 remedial action at the Site. The Health District shall be invited to participate in such  
13 reviews.

#### 14 **XXVIII. PUBLIC PARTICIPATION**

15 A Public Participation Plan is attached to this Decree as Exhibit F and is by  
16 reference incorporated herein. Ecology shall maintain the responsibility for public  
17 participation with respect to the Site. However, Leichner shall cooperate with Ecology and  
18 shall:

19 A. Prepare drafts of public notices and fact sheets at important stages of the  
20 remedial action, such as the submission of work plans and the completion of engineering  
21 design. Ecology will finalize (including editing if necessary) and distribute such fact sheets  
22 and prepare and distribute public notices of Ecology's presentations and meetings;

23 B. Notify Ecology's project coordinator prior to issuance of all press releases  
24 and fact sheets and before major meetings on the remedial action (as with the public or  
25 local government);  
26



1 C. Participate in public presentations on the progress of remedial action at the  
2 Site. Participation may be through attendance at public meetings to assist in answering  
3 questions or as a presenter;

4 D. In cooperation with Ecology, arrange and/or continue information  
5 repositories to be located at the Southwest Washington Health District in Vancouver,  
6 Washington and at Ecology's Southwest Regional Office in Lacey, Washington. At a  
7 minimum, copies of all public notices, fact sheets, and press releases, the post-closure  
8 permit to be issued by the Health District, the Compliance Monitoring Plan, all quality  
9 assured groundwater, surface water, soil sediment, and air monitoring data, remedial action  
10 plans, supplemental remedial planning documents, and all other similar documents relating  
11 to performance of the remedial action required by this Decree shall be promptly placed in  
12 these repositories.

13 **XXIX. DURATION OF DECREE**

14 This Decree shall remain in effect and the remedial program described in this  
15 Decree shall be maintained and continued until Leichner receives from Ecology written  
16 notice that the requirements of this Decree have been satisfactorily completed, or until the  
17 Court directs that the Decree be terminated.

18 **XXX. EFFECTIVE DATE**

19 This Decree is effective upon the date it is entered by the Court.

20 **XXXI. PUBLIC NOTICE AND WITHDRAWAL OF CONSENT**

21 This Decree has been the subject of public notice and comment under RCW  
22 70.105D.040(4)(a). As a result of this process, Ecology has found that this Decree will lead  
23 to a more expeditious cleanup of hazardous substances at the Site, in compliance with  
24 applicable cleanup standards.  
25  
26

1 If the Court withholds or withdraws its consent to this Decree, it shall be null and  
2 void at the option of any party and the accompanying Complaint shall be dismissed without  
3 costs and without prejudice. In such an event, no party shall be bound by the requirements  
4 of this Decree.

5 For State of Washington,  
6 Department of Ecology

For State of Washington  
Attorney General's Office

7 *Mary Burg* 6/25/96  
8 MARY BURG Date  
9 Program Manager  
Toxics Cleanup Program

*Tanya Barnett* June 25, 1996  
TANYA BARNETT Date  
WSBA #17491  
Assistant Attorney General

10 For Leichner Brothers Land Reclamation Corporation

11  
12 *Greg Lechner* June 12, 1996  
13 Its President Date

\_\_\_\_\_  
Its Date

14 Approved as to form:

15 *Leslie Hellerman* 6/21/96  
16 HELLER, EHRMAN, WHITE Date  
17 & McAULIFFE  
18 Attorneys for Leichner Brothers  
Land Reclamation Corp.

19 DATED this 17 day of July, 1996.

22 *WILLIAM T. MATHES*

23 JUDGE/COMMISSIONER  
24 Clark County Superior Court



**EXHIBIT - B**

**CLEANUP ACTION PLAN**

**LEICHNER LANDFILL**

**CLARK COUNTY, WASHINGTON**

**JUNE 1996**

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## 1. INTRODUCTION

This Cleanup Action Plan (CAP) has been prepared by the Washington State Department of Ecology (Ecology) to specify cleanup standards and identify the cleanup action to be implemented at the Leichner Landfill (also referred to as "the site"). As required by the Model Toxics Control Act (MTCA), this CAP describes the alternatives for remediation at the site.

## 2. SITE DESCRIPTION

Leichner Landfill is a solid waste landfill currently owned and historically operated by Leichner Brothers Land Reclamation Corporation (Leichner). The landfill is located in Clark County, Washington, about 5 miles northeast of the City of Vancouver in Section 4, Township 2N, Range 2E, and Section 33, Township 3N, Range 2E of the Willamette Meridian (Figure 1).

The unlined facility was a gravel pit prior to the start of landfill operations in the late-1930s. Prior to the mid-1960s, waste received at the landfill was burned. The burning of waste was terminated in the mid-1960s, and the landfill subsequently operated by compacting waste in areas where sand and gravel had been mined. The majority of the solid waste received at the landfill was collected by the Clark County Disposal Group from residential and commercial customers located within the city limits of Vancouver and throughout unincorporated Clark County. Solid waste was also received from the other cities and towns within Clark County, and the general public and other self-haul customers.

The landfill was open and accepted waste for disposal until the end of 1991. Seventy acres of the 100-acre site have received solid waste. All of the landfilled acres have received final closure with an engineered composite cap and a landfill gas control/recovery system. The composite final cover consists of a 60-mil high density polyethylene (HDPE) geomembrane covered by a 1-foot thick drainage layer, geotextile filter, and 16-inches of topsoil. A stormwater control system collects stormwater runoff from the cover system. Landfill closure occurred in phases during the summer seasons of 1989, 1990, 1991, and 1992. Final closure occurred in 1992 and included improvements to the dumpster and truck wash areas. The Clark County Disposal Group utilizes the dumpster and truck wash areas. Refuse hauling operations will continue to be based at the site. Refuse is now collected and hauled to a transfer station. The landfill cap design, landfill gas control/recovery system, and the stormwater control system are discussed in detail in the February 1989 Leichner Brothers Landfill Master Operations Plan prepared by Sweet-Edwards/EMCON (now EMCON). The facility layout, monitoring well locations, and locations of solid waste are shown in Figure 2.

### 3. PROJECT HISTORY

In 1987, Ecology and Leichner executed Consent Order No. DE 86-S131 under authority of the State of Washington Water Pollution Control Act, Chapter 90.48 Revised Code of Washington (RCW). This order required Leichner to analyze site conditions and develop a corrective plan to protect public health and the environment. Work completed under the order confirmed the existence of hazardous substances in ground water under the site. This work is summarized in the February 1988 Remedial Investigation Report (RI) and the April 1988 Feasibility Study Report (FS), both prepared by EMCON.

In November 1988, voters passed the State of Washington Hazardous Waste Cleanup - Model Toxics Control Act (MTCA), which requires remedial actions at landfills and other sites contaminated with hazardous substances. As a result, Ecology issued Order No. DE 89-S119 under the MTCA in April 1989. The order, issued to Leichner as a potentially liable person (PLP) for the Leichner Landfill, required further investigation and remediation of contaminated ground water beneath the site. In June 1989, Ecology amended Order No. DE 89-S119. As required by the order, an Interim Report prepared by EMCON was submitted to Ecology in November 1989. The Interim Report summarized hydrogeologic and treatability studies on-going at the time of writing. In August 1990, Ecology issued the Second Amendment to Order No. DE 89-S119 outlining further required investigations. The results of these further investigations are summarized in the October 1991 Remedial Investigation Amendment prepared by EMCON. Since issuance of Order DE 89-S119, project progress has been summarized in monthly progress reports submitted to Ecology, the Southwest Washington Health District, the City of Vancouver, and the Clark County Department of Public Works.

Based on technical considerations and costs, the April 1989 order established that ground water withdrawal and treatment would be part of the final remedial action alternative. It was also established that treated ground water would be discharged to the stormwater control system. Order No. DE 89-S119 also required an evaluation and determination of the most effective pump and treat technology to remediate contaminated ground water at Leichner Landfill. As a result, a total of five additional documents evaluating various ground water pump and treat technologies at the site were prepared by EMCON and submitted to Ecology. The *Technical Memorandum for Ground Water Treatment Alternatives*, March 1990, evaluated alternative ground water treatment technologies proposed for bench- and pilot-scale studies. The *Technical Memorandum of Ground Water Modeling*, May 1990, described the numerical modeling used to define contaminant transport in ground water. The *Ground Water Treatment Bench-Scale Studies Report*, July 1990, presented results of the bench-scale studies performed by EMCON in March 1990. Results of the bench-scale studies were the basis for selecting the preferred treatment system evaluated during the pilot-scale study. In October 1990, the *Ground Water Treatment Pilot-Scale Study Experimental Plan* described the objectives, requirements, preliminary design, and experimental procedures to be performed in conducting eight pilot-scale study tests. The final document, *Ground Water Treatment Pilot-Scale Study Report*, September 1991, summarized results obtained from



performing the eight planned tests, with some modifications, of the experimental plan in October 1990 and March 1991. This pilot-scale study report provides the technical foundation for full-scale design, implementation, and operation of a final ground water treatment system.

In April 1992, the former refuse burn area southwest of the landfill was investigated as a potential source of hazardous substances (Figure 2). Soil samples collected and analyzed from nine excavated test pits indicated that the burn area was a source of ammonia and nitrate. About 68,000 yards of material was excavated from this area. This material was placed within the landfill footprint prior to final closure with a composite cap system.

A consent decree was proposed for remedial action at the landfill in July 1992. However, due to some legal uncertainties between Leichner, the City of Vancouver and Clark County about cleanup costs, the consent decree was never finalized in court. In addition to the design, implementation, and operation of a ground water extraction and treatment system, the proposed consent decree required an amendment to the Closure Plan, post-closure requirements, and a domestic well canvass. At the time consent decree negotiations were underway, the number of nearby residences still using domestic supply wells completed in the Alluvial or Troutdale aquifers was not known. The lateral and vertical extent of the leachate contaminant plume emanating from the landfill had not been fully defined. Low concentrations of volatile organic compounds (VOCs) had been detected in ground water samples collected from four domestic supply wells that are located downgradient of Leichner Landfill.

In May 1993, Ecology and Leichner entered into Agreed Order No. 93TC-S151 to continue with remedial actions while the legal uncertainties regarding ground water extraction and treatment costs were being resolved. This Order required all of the actions specified in the proposed 1992 Consent Decree, except for the design, implementation, and operation of a ground water extraction and treatment system.

To ensure the protection of public health and the environment, a survey was performed to determine the number and location of Alluvial and Troutdale domestic supply wells within a reasonable distance downgradient of the landfill. In addition, the domestic well canvass included sampling of currently used domestic supply wells to determine if they have been impacted by Leichner Landfill. Provisions for replacing domestic wells affected by the landfill that exceed drinking water standards with water supplied by the City of Vancouver or other alternate water supplies were included. No domestic wells were found to exceed drinking water standards.

The procedures for conducting the domestic well survey are outlined in a document titled *Leichner Landfill, Domestic Well Canvass Work Plan*, March 1993. The findings of the domestic well survey are summarized in *Leichner Landfill, Domestic Well Canvass*, November, 1993. The requirements of the Closure Plan Amendment are included in a report titled *Construction Report, Leichner Brothers Landfill Closure*, May 1993. Post-closure

requirements are outlined in a two volume operation and maintenance manual. Volume I addresses the landfill gas collection/destruction system, and was finalized in April, 1995. Volume II addresses the storm water system and the final cover system, and is currently in draft form.

Quarterly ground water monitoring has continued since final landfill closure in 1992. Ground water contaminant concentrations have declined since the unfinalized Consent Decree and Cleanup Action Plan were proposed in July 1992. This CAP reflects the changes that have occurred since the proposed July 1992 CAP. When the Consent Decree implementing this CAP becomes effective, the May 1993 Agreed order No. 93TC-S151 will terminate.

#### 4. SUBSURFACE CONDITIONS

Leichner Landfill is underlain by two distinct geologic units. The Pleistocene age alluvium (Alluvium) extends from the ground surface to a depth of about 70 to 100 feet. Beneath the Alluvium is the upper member of the Pliocene age Troutdale formation. The Alluvium consists of sand, gravelly sand, and silty sand. The upper member of the Troutdale formation typically consists of sand and gravel, with a fine sand and silt matrix.

The hydrogeology of the site consists of an unsaturated, or vadose zone from the ground surface to a depth of about 30 to 40 feet; the Alluvial aquifer, an unconfined sand aquifer about 35 to 45 feet thick; and the Troutdale aquifer, a semi-confined to confined, cemented to unconsolidated, sand and gravel aquifer. East of the landfill, at monitoring well LB-4C, a local 20 foot thick confining/perching layer of interbedded silt, sandy silt and clayey silt is present at the base of the Alluvium. At LB-5C, south of the landfill, a 40 foot thick layer of interbedded sand and silty sand at the base of the Alluvium may act as a local semi-confining/perching layer. No other potential confining layer between the Alluvial and Troutdale aquifers is suggested at the site. A downward vertical hydraulic gradient from the alluvium to the Troutdale aquifer is indicated throughout the site. Local vertical hydraulic communication between the Alluvial and Troutdale aquifers has been observed in the area southwest of the landfill. Horizontal ground water flow in the Alluvial aquifer is to the southwest and west. In the Troutdale aquifer, horizontal ground water flow is predominately to the south.

The Troutdale aquifer is the drinking water supply for the City of Vancouver. There are two City of Vancouver well fields in operation near the landfill: The Orchards Well Field (Station 8) and the Andresen Road Well Field (Station 14). Station 8 is about 8,000 feet south-southeast of the site. The three wells at Station 8 withdraw ground water from the Troutdale aquifer at depth intervals of 86 to 105 feet, 94 to 109 feet, and 189 to 200 feet. At Station 14, located about 9,000 feet southwest of the site, two wells pump ground water from the Troutdale aquifer from depth intervals of 156 to 172 feet and 179 to 194 feet. Although most of the residences in the vicinity of the landfill now receive drinking water

from the City of Vancouver, both the Troutdale and Alluvial aquifers provide drinking water for some neighboring homes and farms.

## 5. NATURE AND EXTENT OF CONTAMINATION

Investigations performed at Leichner Landfill indicate that ground water is the only medium affected by the release of hazardous substances from the landfill. Leaching is probably the primary contaminant release mechanism for hazardous substances from the landfill. Leachate is a product of natural biodegradation, infiltration, and ground water migrating through landfilled refuse. The infiltration of precipitation through the refuse was probably the major source of leachate production. However, data from site investigations indicate that ground water levels may be within the landfilled refuse in the northeast quadrant of the capped area in Figure 2. Since the actual vertical extent of landfilled refuse is not known, it is possible that refuse is below ground water levels in other parts of the landfill as well.

Ground water quality in both the Alluvial and Troutdale aquifers has been affected by the landfill. However, the composite cap system constructed over the landfill has minimized infiltration of precipitation through the waste. Leachate production is predicted to decline accordingly. Ground water monitoring data reflect the downward trend in leachate generation.

### 5.1 Alluvial Aquifer

Monitoring wells completed in the Alluvial aquifer downgradient (southwest) of the landfill display elevated levels of inorganic water quality parameters, metals, and low levels of VOCs. VOCs present the greatest potential threat to human health at this site. Inorganic water quality parameters that are elevated in the Alluvial aquifer include specific conductance, chloride, calcium, and ammonia. Concentrations of both total and dissolved iron and manganese above the secondary drinking water standards of 0.3 mg/l and 0.05 mg/l, respectively, are present in the alluvial aquifer.

A variety of VOCs are present in the Alluvial aquifer downgradient of the landfill. The distribution of specific VOCs is variable from well to well. Presented in Table 1 are the primary VOCs and concentration ranges reported in the Alluvial aquifer from the time routine monitoring began in 1987 until the landfill cover was completed in 1992, and the concentration ranges since the landfill cover system was installed in 1992 (summarized from the Leichner Landfill Ground Water Database as of September 1995).

The pre-remedial action distribution of total VOCs in the Alluvial aquifer, using time averaged data, is shown in Figure 3. The post-remedial action distribution of VOCs in the Alluvial aquifer using time-averaged data for 1992 through 1995 is shown in Figure 4. The summarized pre and post closure data presented in Table 1 and Figures 3 and 4 demonstrate the reduction in ground water VOC concentrations since final closure of the landfill.

## 5.2 Troutdale Aquifer

Monitoring wells completed in the Troutdale aquifer downgradient (south-southwest) of the landfill display elevated levels of inorganic water quality parameters, and metals. However, the Troutdale aquifer appears to be less impacted by the landfill than the Alluvial aquifer. Elevated inorganic water quality parameters include specific conductance, calcium, chloride, and sulfate. Total and/or dissolved manganese in concentrations exceeding the secondary drinking water standard of 0.05 mg/l have been detected in Troutdale monitoring wells LB-2D, LB-13D, LB-17D, and LB-21D. Concentrations of total and/or dissolved iron exceeding the secondary drinking water standard of 0.3 mg/l have been detected in Troutdale monitoring wells LB-1D, LB-4D (background), LB-10D, LB-13D, LB-14D, LB-17D, and LB-21D. Low concentrations of VOCs have sporadically been detected in monitoring wells LB-1D, LB-5D, LB-10D, and LB-27D. Low concentrations of VOCs (below drinking water standards and MTCA cleanup levels) were detected in domestic supply wells completed in the Troutdale aquifer. These wells are located about 3,000 ft southwest of the Leichner Landfill property boundary. It is not clear from these data alone whether these contaminants are from the landfill.

## 6.0 CLEANUP STANDARDS

As outlined in Washington Administrative Code (WAC) 173-340-700 (2)(a), establishing cleanup standards for individual sites requires the specification of cleanup levels, point(s) of compliance, and additional regulatory requirements that apply to a particular cleanup action.

### 6.1 Ground Water Cleanup Levels

Under WAC 173-340-720(1)(a), cleanup levels for ground water are based on the highest beneficial use of the affected ground water, and the reasonable maximum exposure expected to occur under both current and potential future site use conditions. The highest beneficial use of ground water from both the Alluvial and Troutdale aquifers is for drinking water. Therefore, cleanup standards are based on exposure to hazardous substances via ingestion of drinking water, which represents the reasonable maximum exposure at the site. Ground water cleanup levels were determined using the standard Method B. The cleanup of contaminated ground water at Leichner Landfill is not considered a routine cleanup by Ecology (see WAC 173-340-130(7)).

The Method B ground water cleanup levels and compliance levels for both the Alluvial and Troutdale aquifers are presented in Table 2. These parameters require cleanup levels because they were consistently detected in ground water at the site in concentrations that exceed cleanup levels. The cleanup levels for vinyl chloride and 1,1-dichloroethylene were calculated using the Method B equations in WAC 173-340-720 (3)(a)(ii) because the concentrations established under applicable state and federal laws are not sufficiently protective. To be considered sufficiently protective, all individual concentrations established

under applicable state and federal laws must have an excess cancer risk less than 1 in 100,000 and a hazard quotient less than 1. The cancer risk and hazard quotient are calculated by solving the ground water equations (WAC 173-340-720(3)(a)(ii)) for cancer risk and hazard quotient using the concentration established under applicable state and federal laws. If the concentration established under applicable state and federal laws is not sufficiently protective, then a protective cleanup level is calculated by solving the equations in WAC 173-340-720(3)(a)(ii) using a cancer risk of 1 in 1,000,000 and a hazard quotient of 1. All of the other cleanup levels are maximum or secondary maximum contaminant levels established under the Safe Drinking Water Act and are sufficiently protective.

The Method B cleanup levels for both vinyl chloride and 1,1-dichloroethylene are lower than the current practical quantitation limit (PQL). In these cases, the cleanup level may be considered to be attained if the parameter is undetected at the PQL, and the conditions outlined in WAC 173-340-707 are met to Ecology's satisfaction. The current PQL for both vinyl chloride and 1,1-dichloroethylene is 0.1 ppb, and is considered to be the compliance level for these two contaminants (Table 2). The ground water cleanup levels and compliance levels in Table 2 do not exceed a total excess cancer risk of 1 in 100,000 and do not exceed a total hazard quotient of 1, as required in WAC 173-340-720 (5).

## 6.2 Point of Compliance

The point of compliance for ground water cleanup at Lechner Landfill will be the existing property boundary (Figure 2). Ground water cleanup levels shall be achieved in waters of the Alluvial and Troutdale aquifers from the point of compliance to the outer boundary of the existing contaminant plume. The remedial action of capping the landfill appears to be containing the contaminant plume source. Cleanup levels are anticipated to be achieved through natural attenuation.

## 7. SUMMARY OF REMEDIAL ACTION ALTERNATIVES

The remedial action alternatives presented in the April 1988 FS focused on leachate control (capping), landfill gas control/recovery, surface water and erosion control, environmental monitoring, and the provision of a public water supply.

Leachate control (capping), landfill gas control/recovery and monitoring, surface water and erosion control, and improvements to the dumpster/truck wash areas have been implemented as part of landfill closure under the Washington State Minimum Functional Standards for Solid Waste Handling (MFS), Chapter 173-304 WAC. Public water supply concerns have been addressed by the Domestic Well Canvass conducted in 1993. The survey confirmed that the majority of neighboring homes are now supplied water by the City of Vancouver water system. Seventeen domestic supply wells were sampled for inorganic parameters, metals and VOCs. Low levels of VOCs were detected in 11 wells. None of the test results exceed the cleanup levels presented in Table 2.

Although capping the landfill appears to have significantly reduced the quantity of leachate being generated, migration of ground water through portions of the landfill will be an ongoing potential source of leachate production. The technologies available to control the migration of leachate contaminated ground water are limited to physical or hydraulic containment. Containment via a slurry wall was evaluated in the RI/FS. A slurry wall is not technologically viable at the site because no continuous low permeability layer, which could serve as a tie-in for a containment wall, was identified within a depth of 150 ft below ground surface. In addition, a slurry wall would not impede the downward migration of contaminated ground water from the Alluvial to the Troutdale aquifer. In 1992, Ecology determined that hydraulic containment via pump and treat was the only technologically feasible alternative to control the lateral and vertical migration of leachate contaminated ground water, and to remediate leachate contaminated ground water. By hydraulically controlling the contaminant plume source, further off site migration would be minimized.

However, since the landfill was capped in 1992, ground water contaminant concentrations have decreased. The concentrations of VOCs, inorganic parameters, and metals in ground water at the site are now too low to justify ground water extraction and treatment. Based on ground water monitoring data, the landfill cover appears to be effectively controlling leachate production. Ongoing ground water monitoring is necessary to ensure that the landfill cover system continues to be effective. If ground water concentrations increase in the future, Ecology reserves the right to re-evaluate remedial actions required.

## 8. PROPOSED REMEDIAL ACTION ALTERNATIVE

The remedial action objective is to minimize further production and migration of leachate contaminated ground water in order to achieve cleanup standards at the points of compliance.

Capping the landfill has minimized lateral and vertical migration of leachate contaminated ground water by reducing the volume of leachate generated. As discussed previously in this document, capping the landfill was implemented as part of the MFS closure requirements. In addition to meeting MFS requirements, the landfill cap, gas control/recovery system, the surface water and erosion control system, and improvements to the dumpster and truckwash areas are remedial actions under the MTCA.

The post-closure requirements of Chapter 173-304 WAC and compliance monitoring will ensure that the above remedial actions achieve the remedial action objective. Therefore, the selected cleanup action consists of final landfill closure and post-closure requirements outlined in Chapter 173-304 WAC, and compliance monitoring as approved by Ecology. Lechner shall obtain a post-closure permit from the Southwest Washington Health District and shall submit a compliance monitoring plan to Ecology for review and approval.

## 9. SELECTION OF CLEANUP ACTION

The MTCA specifies the criteria for selecting an appropriate cleanup action. Presented below are the requirements for selecting a cleanup action along with determinations of how the selected cleanup action meets each requirement.

### 9.1 Protection of Human Health and the Environment

The selected alternative will protect human health and the environment by minimizing the vertical migration of leachate contaminated ground water to the Troutdale aquifer, and further off-site migration of contaminated ground water in the Alluvial aquifer.

### 9.2 Compliance with Cleanup Standards

The selected cleanup action will continue to minimize the volume of leachate generated. Cleanup standards will be achieved in the Alluvial and Troutdale aquifers from the point of compliance to the outer boundary of the existing contaminant plume through natural attenuation. Some cleanup levels have been achieved in some monitoring wells located near the property boundary. Compliance with cleanup levels using post-closure (1992 through 1995) ground water monitoring data will be evaluated in the compliance monitoring plan.

To ensure that human health and the environment are being protected, the cleanup action shall be reviewed every five years by Ecology in accordance with WAC 173-340-420 and section XXVII of the Consent Decree.

### 9.3 Compliance with Applicable, Relevant and Appropriate Requirements (ARARs)

The following ARARs apply to the site:

- a. Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC.
- b. Hazardous Waste Cleanup - Model Toxics Control Act, Chapter 70.105D RCW
- c. State Environmental Policy Act, Chapter 197-11 WAC.
- d. Minimum Standards for Construction and Maintenance of Water Wells, Chapter 173-160 WAC.
- e. Water Pollution Control, Chapter 90.48 RCW.
- f. NPDES Permit Program, Chapter 173-220 WAC.

- g. Water Quality Standards for Surface Waters of the State of Washington, Chapter 173-201 WAC.
- h. Minimum Functional Standards for Solid Waste Handling, Chapter 173-304 WAC.
- i. Dangerous Waste Regulations, Chapter 173-303 WAC.
- j. Washington Clean Air Act, Chapter 70.94 RCW.
- k. Washington Industrial Safety and Health Act (WISHA).

#### Federal Laws and Regulations

- l. Resource Conservation and Recovery Act (RCRA).
- m. Occupational Safety and Health Act (OSHA), 29 CFR subpart 1910.120.
- n. Federal Water Pollution Control Act of 1972 (Clean Water Act).
- o. Water Quality Act of 1987:
  - 1) Section 308. Establishes water quality criteria for toxic pollutants.
  - 2) Section 402. Establishes the NPDES permit process for discharges to surface water bodies.
- p. Safe Drinking Water Act of 1974.

The above list of ARARs does not preclude subsequent identification of applicable state and federal laws (WAC 173-340-360 (10)(a)(vii)). The selected cleanup action is capable of complying with all of the above ARARs.

#### 9.4 Compliance Monitoring

Compliance monitoring requirements are specified in WAC 173-340-410. The following compliance monitoring will be included as part of the selected cleanup action:

- a. Protection monitoring will be provided to ensure protection of human health and the environment during the operation and maintenance period of the landfill cover system.
- b. Performance monitoring will be provided to confirm the cover system has achieved cleanup standards, and all other performance criteria (ARARs). Performance monitoring data collected since landfill closure in September 1992 will be used to determine if cleanup levels have been achieved.



- c. Confirmational monitoring will be provided to confirm the long-term effectiveness of the landfill cover system, after cleanup standards and all other performance criteria have been achieved.

A compliance monitoring plan shall be prepared and submitted to Ecology for review and approval.

#### 9.5 Long-Term Effectiveness

The selected remedial design will remain effective in the long-term provided continuous monitoring and maintenance occur. These factors will be addressed in the compliance monitoring plan, and the post-closure plan required by WAC 173-304-407. Institutional controls, including deed restrictions will prevent use of the site in ways which will compromise the cleanup action. The effectiveness of the cleanup action will be evaluated as part of the periodic review required in WAC 173-340-420 and section XXVII of the Consent Decree.

#### 9.6 Short-Term Effectiveness

Human health and the environment were protected during construction and implementation of the landfill cover system and was addressed in various engineering design reports submitted to Ecology for approval.

#### 9.7 Permanent Reduction of Toxicity, Mobility and Volume of Hazardous Substances

Since it is not feasible to remove the contents of the landfill, there is no way to reduce the toxicity or volume of hazardous substances within the landfill. The mobility of hazardous substances has been reduced by capping the landfill. The landfill cover system will minimize the vertical and lateral migration of leachate contaminated ground water by reducing the quantity of leachate generated.

#### 9.8 Ability to be Implemented

The selected cleanup alternative has been implemented. The landfill has been closed, the cover system is complete, and required post-closure requirements are being implemented. Ground water monitoring required in the approved compliance monitoring plan will replace the current quarterly monitoring being performed.

#### 9.9 Cleanup Costs

For the purpose of this cleanup action plan, the cost of the selected cleanup action includes the ongoing maintenance and operation of the facility, monitoring, and analysis of data generated. The annual cost to perform these activities is estimated to be between \$300,000 and \$500,000 per year (in 1996 dollars). As required under WAC 173-304-407, post-closure

maintenance and monitoring activities shall continue for at least a twenty year period or until the health department finds that post-closure monitoring has established that the facility is stabilized (i.e., little or no settlement, gas production, or leachate generation). In addition, WAC 173-340-360(8)(b) requires long-term monitoring and institutional controls to continue until residual hazardous substance concentrations no longer exceed site cleanup levels. The institutional controls required for this site are described in Exhibit C, Restrictive Covenant, of the Consent Decree implementing this CAP.

#### 9.10 Addresses Community Concerns

Community acceptance was evaluated based on the comments received during the public comment period. Public comments were considered during preparation of this final CAP.

## REFERENCES

- Mundorff, W.J., 1964, Geology and Ground Water Conditions of Clark County, Washington, with a Description of a Major Alluvial Aquifer Along the Columbia River, United States Geological Survey Water-Supply Paper 1600.
- Sweet-Edwards/EMCON, Inc., 1988, Leichner Landfill Remedial Investigation Report.
- Sweet-Edwards/EMCON, Inc., 1988, Feasibility Study for the Leichner Landfill.
- Sweet-Edwards/EMCON, Inc., 1989, Leichner Brothers Landfill Master Operations Plan.
- Sweet-Edwards/EMCON, Inc., 1989, Interim Report Hydrogeologic Characterization and Pilot Treatment System.
- Sweet-Edwards/EMCON, Inc., 1990, Technical Memorandum for Ground Water Treatment Alternatives.
- Sweet-Edwards/EMCON, Inc., 1991, Ground Water Treatment Pilot-Scale Study Report.
- Sweet-Edwards/EMCON, Inc., 1991, Leichner Landfill Remedial Investigation Amendment.
- EMCON, 1993, Leichner Landfill, Domestic Well Canvass Work Plan.
- EMCON, 1993, Leichner Landfill, Domestic Well Canvass.
- EMCON, 1993, Construction Report, Leichner Brothers Landfill Closure.
- EMCON, 1995, Operation and Maintenance Manual for Leichner Brothers Landfill, Volume I: Landfill Gas Extraction System.
- EMCON, 1996, Operation and Maintenance Manual for Leichner Brothers Landfill, Volume II: Storm Water System and Final Cover System.

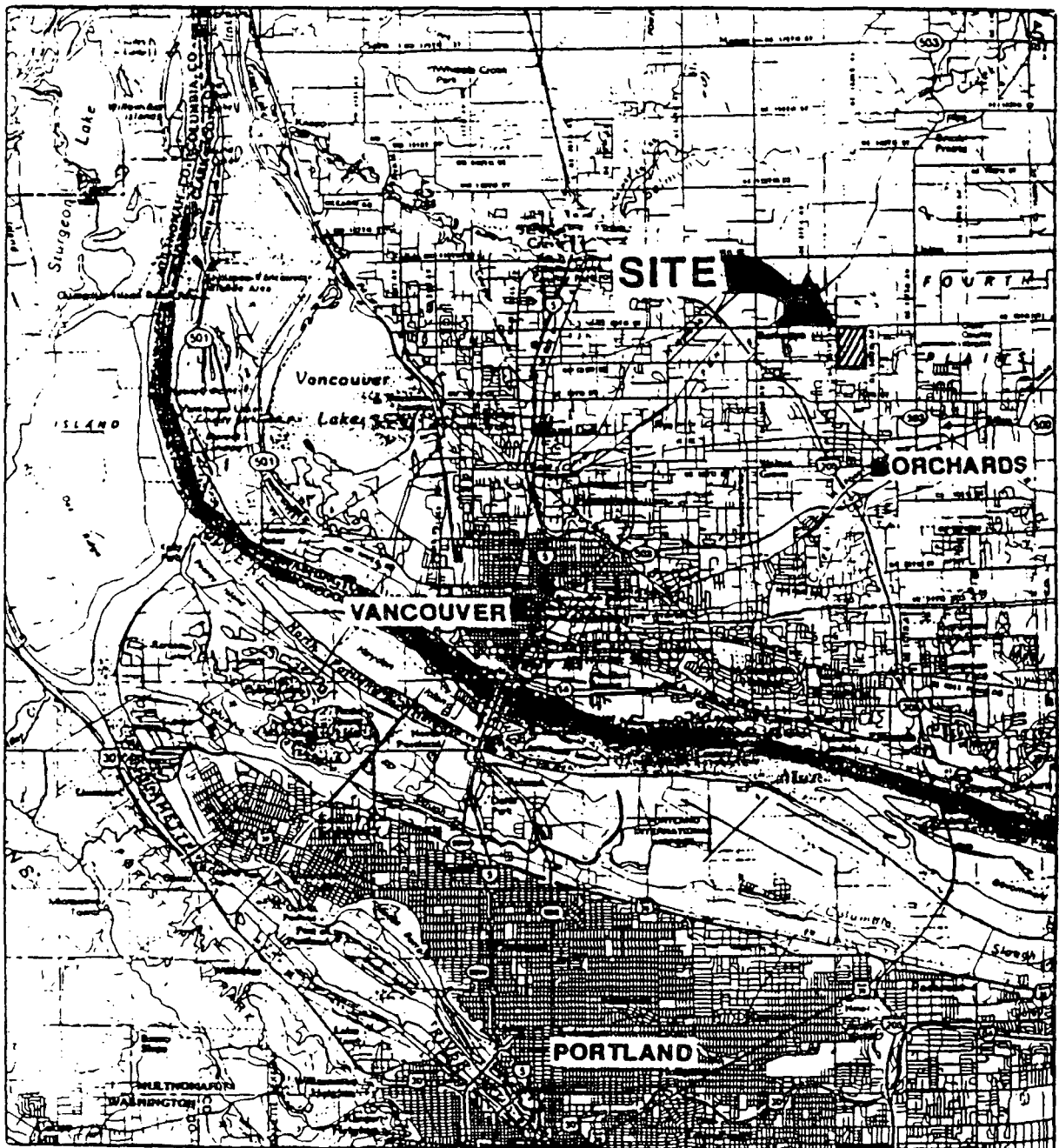
Table 1. Pre-remedial and Post-remedial VOC Distribution in the Alluvial Aquifer.

<u>Volatile Organic Compound</u>	<u>Pre-1992 Data</u>	<u>Post-1992 Data</u>
Tetrachloroethylene (PCE)	< 1.0 - 21.2 ppb	< 0.2 - 1.4 ppb )
1,1,1-Trichloroethane	< 1.0 - 22.0 ppb	< 0.1 - 0.3 ppb
Trichloroethylene (TCE)	< 1.0 - 8.6 ppb	0.2 - 0.3 ppb )
1,1-Dichloroethylene (1,1-DCE)	< 1.0 - 5.1 ppb	< 0.1 - 1.6 ppb )
Chlorobenzene	< 1.0 - 2.4 ppb	< 0.1 - 1.9 ppb
Cis -1,2 Dichloroethylene (cis-1,2-DCE)	< 1.0 - 40.0 ppb	< 0.1 - 6.6 ppb
Vinyl Chloride	< 1.0 - 6.0 ppb	< 0.1 - 0.2 ppb )
1,1-Dichloroethane (1,1-DCA)	< 1.0 - 13.0 ppb	< 0.1 - 3.6 ppb
Chloroethane	< 1.0 - 14.0 ppb	< 0.1 - 6.6 ppb
1,4-Dichlorobenzene (1,4-DCB)	< 1.0 - 2.3 ppb	< 0.1 - 1.6 ppb )

Table 2. Leichner Landfill Ground Water Cleanup Levels for the Alluvial and Troutdale Aquifers.

<u>Parameter</u>	<u>Cleanup Level (ppb)</u>	<u>Compliance Level (ppb)</u>
Tetrachloroethylene	5.0	5.0
Vinyl Chloride	0.023	0.1 <sup>1</sup>
Trichloroethylene	5.0	5.0
1,4-dichlorobenzene	1.82	1.82
1,1-dichloroethylene	0.0729	0.1 <sup>1</sup>
Iron (dissolved)	300	300
Manganese (dissolved)	50	50
Ammonia	34,000	34,000
Nitrate (as N)	10,000	10,000
Total Dissolved Solids	500,000	500,000
Specific Conductance	700 $\mu$ mho/cm	700 $\mu$ mho/cm

<sup>1</sup> This concentration represents the current practical quantitation limit (PQL). Ecology recognizes that in some cases the PQL may be higher than the cleanup standard for a given parameter. In these cases, the cleanup standard may be considered to be attained if the parameter is undetected at the PQL, and the conditions outlined in WAC 173-340-707 are met to Ecology's satisfaction.

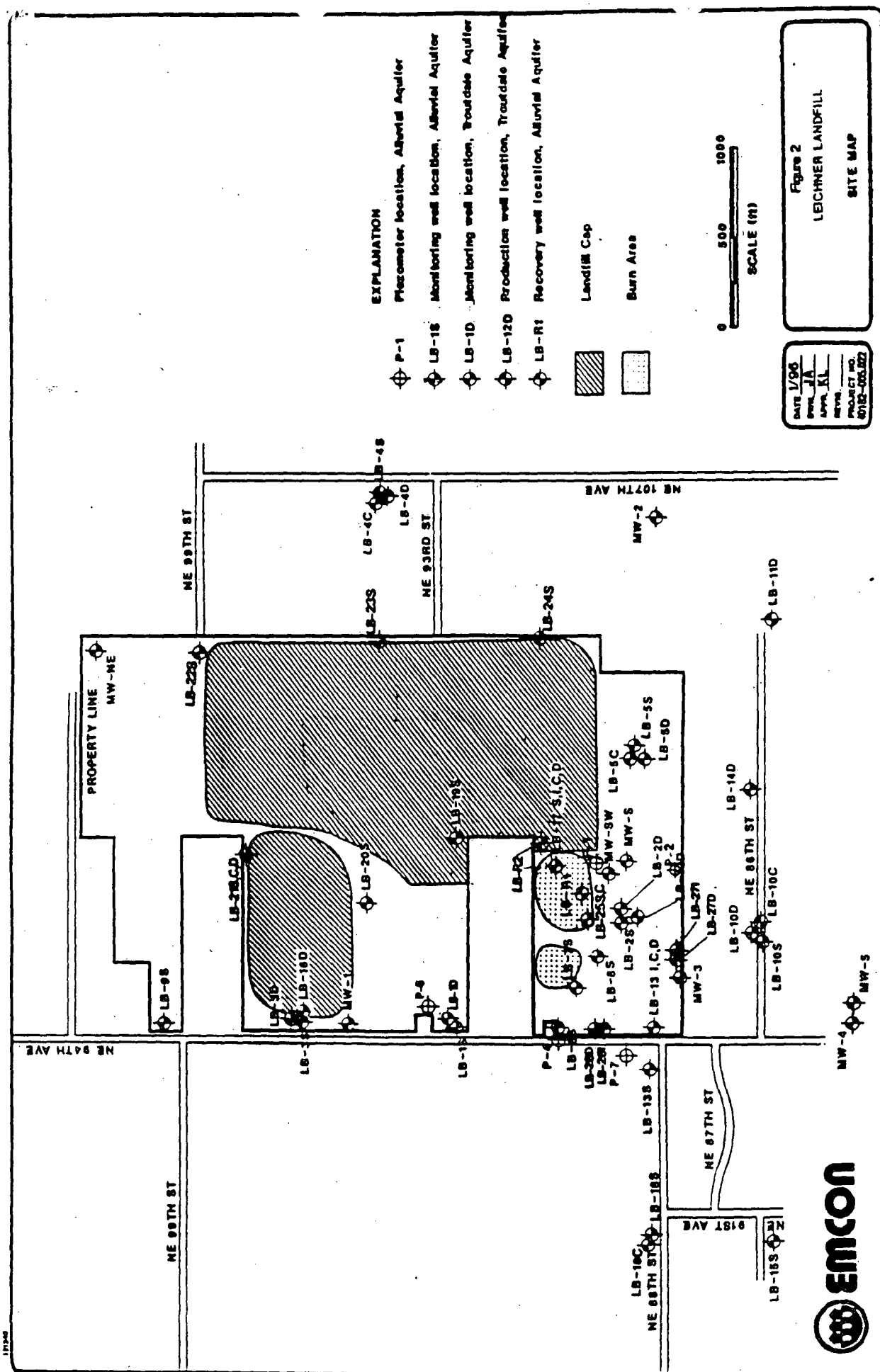


Sweet-Edwards  
EMCON

KUKER-RANKEN INC./ 128502

Figure 1  
LEICHTER LANDFILL  
SITE LOCATION MAP

DATE 11-89  
OWN. JA  
APPR. KL  
REVIS.  
PROJECT NO.  
S8202.13



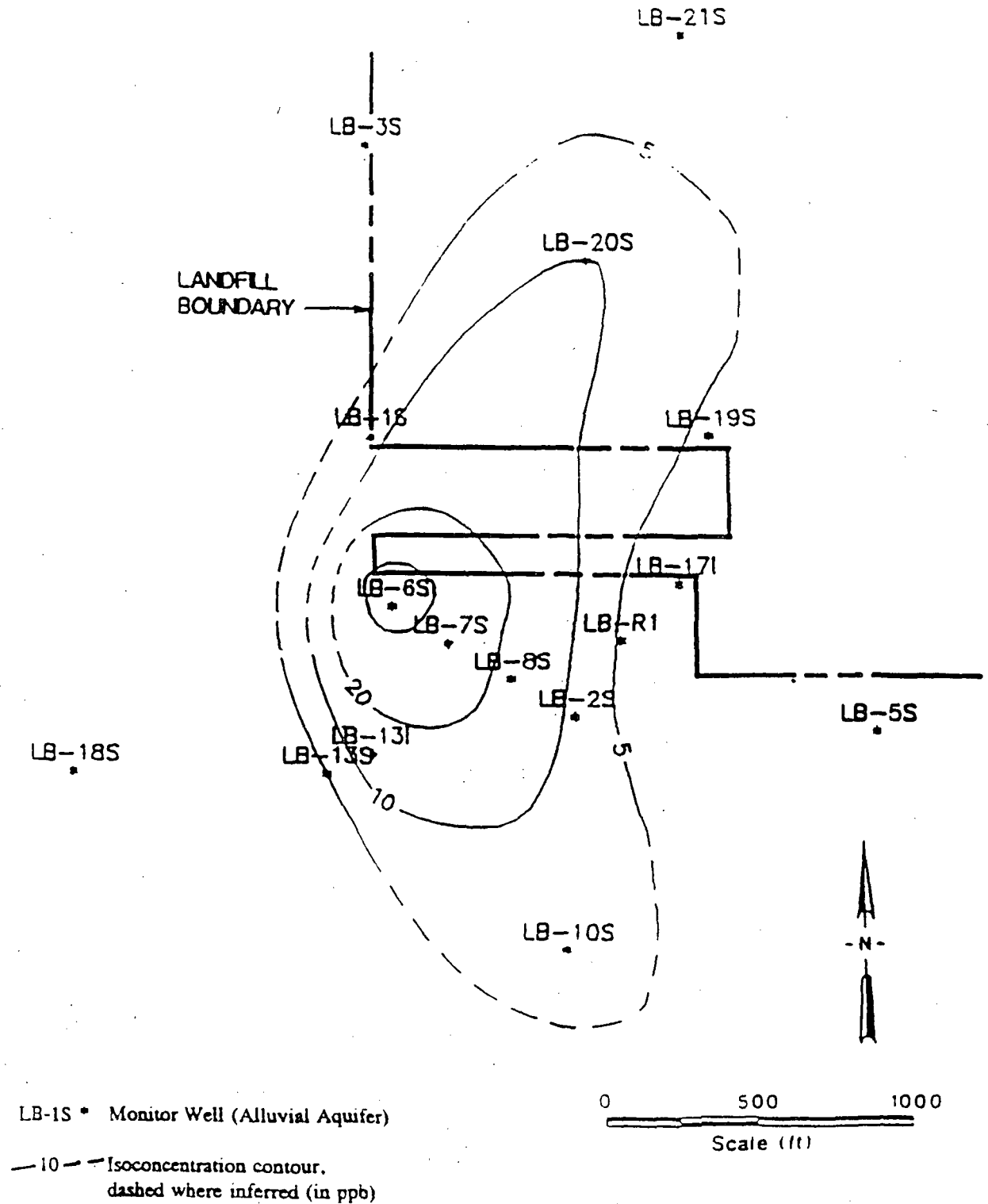
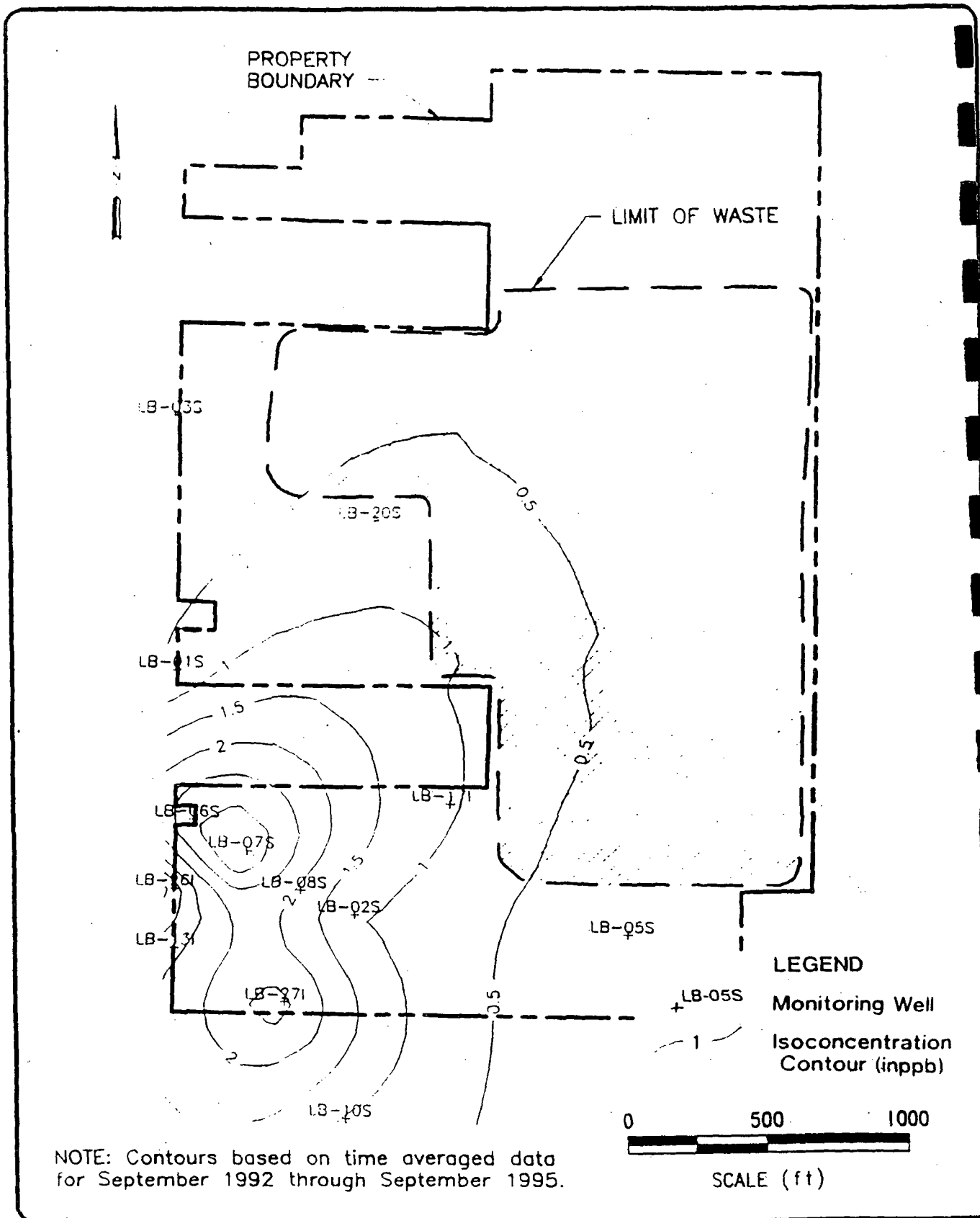


Figure 3  
**LEICHNER LANDFILL**  
 Pre-Remedial Action Total VOC Concentration  
 Averaged Values - Alluvial Aquifer 1987 - 1992





DATE 1/96  
 DWN. MDC  
 REV. \_\_\_\_\_  
 APPR. \_\_\_\_\_  
 PROJECT NO.  
 40182-005.022

Figure 4  
**LEICHTNER LANDFILL**  
 Post-Remedial Action Total VOC Concentration  
 Averaged Values - Alluvial Aquifer 1992 - 1995

## EXHIBIT C

### RESTRICTIVE COVENANT

The property that is the subject of this Restrictive Covenant is the subject of remedial action under Chapter 70.105D RCW. The work done to clean up the property (hereafter the "Cleanup Action") is described in the Consent Decree entered in State of Washington v. Leichner Brothers Land Reclamation Corporation, Clark County Superior Court No. \_\_\_\_\_, and in exhibits to the Consent Decree. This Restrictive Covenant is required by the State of Washington Department of Ecology pursuant to WAC 173-340-440 because contaminants will be left in place on the property. This Restrictive Covenant is necessary to assure the continued protection of human health and the environment and the integrity of the Cleanup Action.

The undersigned, Leichner Brothers Land Reclamation Corporation, is the fee owner of real property in the County of Clark, State of Washington (legal description attached), hereafter referred to as the "Property." The Property encompasses both surface and subsurface estates. Leichner Brothers Land Reclamation Corporation makes the following declarations as to limitations, restrictions, and uses to which the Property may be put, and specifies that such declarations shall constitute covenants to run with the land, as provided by law, and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property.

Section 1. No groundwater may be taken for domestic purposes from any well on the Property.

Section 2. Any activity on the Property that may interfere with the Cleanup Action is prohibited. Any activity on the Property that may result in the release of a hazardous substance that was contained as a part of the Cleanup Action is prohibited, unless allowed under the terms of an NPDES or state waste discharge permit.

Section 3. The owner of the Property must give written notice to the Department of Ecology, or to a successor agency, of the owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property may be consummated by the owner without adequate and complete provision for the continued operation, maintenance, and monitoring of the Cleanup Action.

Section 4. The owner of the Property must notify and obtain approval from the Department of Ecology, or from a successor agency, prior to any use of the Property that is inconsistent with the terms of this Restrictive covenant. The Department of Ecology or its successor agency may approve such a use only after public notice and opportunity for comment, and only if the proposed use will not threaten human health or the environment.

Section 5. The owner of the Property shall allow authorized representatives of the Department of Ecology, or of a successor agency, the right to enter the Property in accordance with the terms set forth in Section IX of the Consent Decree for the purposes of evaluating compliance with the terms of the Consent Decree and the Cleanup Action Plan, to take samples, to inspect Cleanup Action taken at the Property, and to inspect records that are related to the Cleanup Action.

Section 6. The owner of the Property and the owner's assigns and successors in interest reserve the right under WAC 173-340-440 to record an instrument providing that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only with the consent of the Department of Ecology, or of a successor agency. The Department of Ecology or a successor agency may consent to the recording of such an instrument only after public notice and comment, and only if all of Leichner Brothers Land Reclamation Corporation's obligations under the Consent Decree have been satisfactorily completed.

\_\_\_\_\_  
Name  
Title  
Leichner Brothers Land Reclamation Corporation

\_\_\_\_\_  
Date

9207200144

## RE-RECORDED TO CORRECT LEGAL DESCRIPTION

EXHIBIT DOPTION AGREEMENT

OPTION AGREEMENT dated as of the 26 day of May, 1988 between Leichner Brothers Land Reclamation Corporation, a Washington corporation (the "Company") and Clark County, a political subdivision of the State of Washington (the "County").

## RECITALS

A. The Company owns a sanitary landfill "Landfill" and other property located in the vicinity of Northeast 94th Avenue and 86th Street, which is in the unincorporated portion of the County (the "Property").

B. The Company, the County, and the City of Vancouver have entered into a Disposal Agreement pursuant to which the Company has agreed to grant the County the option to purchase a portion of such Landfill.

## AGREEMENTS

In consideration of the mutual covenants and promises contained herein, the parties hereto hereby agree as follows:

1. Grant of Option. The Company hereby grants the County the option to purchase all or a portion of the Property for a purchase price of one dollar (\$1.00) (the "Option Price") in accordance with the terms and provisions of this Agreement.

2. Property. Attached hereto as Exhibit A is a legal description and survey for the property subject to this Option. The parties acknowledge and agree that the description shall be modified by mutual agreement of the parties upon completion of the closure of the Leichner Landfill to include that property actually comprising the active face of the landfill and including the detention facilities and the property acquired from Aune Koski.

3. Exercise of Option. The County shall exercise its option by written notice of exercise to the Company, together with the Option Price both received by the Company within the time period commencing on the date that the Southwest Washington Health District issues a certificate of completion of post-closure pursuant to WAC 173-304-407(7)(c) finding that the Landfill is stabilized with little or no settlement, gas production or leachate generation, and terminating one year later.

4. Transfer of Property. Within ten (10) days of receipt of exercise of this option and the Option Price, the Company shall transfer the Option Property to the County by a quitclaim deed.

5. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Washington.

EXECUTED as of the day and year first above written.

LEICHER BROTHERS LAND RECLAMATION  
CORPORATION

By:

Title:

President

CLARK COUNTY

By:

Title:

Chair

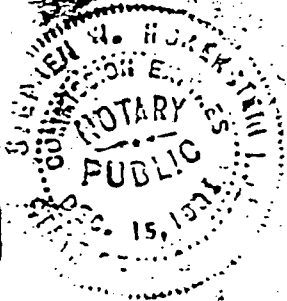
*Approved as to form by  
Richard L. Smith  
Dep. Ass. Atty*

346

STATE OF WASHINGTON )  
: ss.  
County of Clark )

I certify that CRAG Lechner appeared personally before me and that I know or have satisfactory evidence that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the President of Lechner Brothers Land Reclamation Corporation to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

DATED this 26 day of March, 1989.

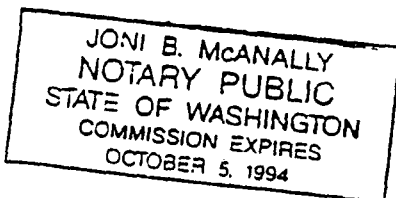


Robert L. Hopper  
NOTARY PUBLIC FOR WASHINGTON  
My Commission Expires: 12/15/91

STATE OF WASHINGTON )  
: ss.  
County of Clark )

I certify that Bessie Miller appeared personally before me and that I know or have satisfactory evidence that she signed this instrument, on oath stated that she was authorized to execute the instrument and acknowledged it as the Chair of the Board of Commissioners of Clark County to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

DATED this 8<sup>th</sup> day of July, 1989.



Joni B. McAnally  
NOTARY PUBLIC FOR WASHINGTON  
My Commission Expires: 10-5-94

347

LEGAL DESCRIPTION FOR LEICHTNER  
Road Easement Over Land Fill

November 29, 1988

An 60.00 foot easement for access and utilities in the James McAllister Donation Land Claim in the Southwest quarter of Section 33, Township 3 North, Range 2 East and the Northwest quarter of Section 4, Township 2 North, Range 2 East of the Willamette Meridian in Clark County, Washington being 30 feet on each side of the following described centerline:

COMMENCING at the Southwest corner of said McAllister D.L.C.;

THENCE North 02° 09' 58" East along the West line of said McAllister D.L.C. 2188.63 feet to a point which bears North 87° 10' 13" West from a 1/2" iron rod set by Olson Engineering Inc. in 1988;

THENCE South 87° 10' 13" East 20.00 feet to said 1/2" iron rod;

THENCE South 87° 10' 13" East 160.01 feet to a 1/2" iron rod set by Olson Engineering Inc. in 1988;

THENCE South 02° 09' 58" West 105.01 feet to a 1/2" iron rod set by Olson Engineering Inc. in 1988;

THENCE South 87° 10' 13" East 210.05 feet to a 1/2" iron rod set by Olson Engineering Inc. in 1988;

THENCE South 87° 51' 35" East 756.61 feet to a 1/2" iron rod set by Olson Engineering Inc. in 1988;

THENCE North 02° 21' 36" East along the East line of that tract described in Exhibit \_\_\_\_\_ as Recorded in that Boundary Agreement recorded in Clark County Auditor's File \_\_\_\_\_, 380.79 feet, more or less, to the Northeast corner thereof;

THENCE South 87° 38' 24" East 40.88 feet to the TRUE POINT OF BEGINNING of said centerline easement;

THENCE South 01° 58' 36" West 337.66 to a 112.00 foot radius curve to the right;

THENCE South 71° 56' 50" West 100.00 feet to the End  
Of Said Easement.



11/30/88



LEGAL DESCRIPTION FOR LEICHTNER BROTHERS  
Land Fill to Transfer to County

December 5, 1988

A parcel of property in Section 4, Township 2 North, Range 2 East and Section 33, Township 3 North, Range 2 East of the Willamette Meridian in the James McAllister Donation Land Claim and in a portion of Newton Addition recorded in Book A of Plats at Page 60 of Clark County records, described as follows:

BEGINNING at the Southwest corner of the McAllister D.L.C.;

THENCE South 02° 10' 22" West along the centerline of N.E. 94th Avenue 466.21 feet to the South line of the North half of lot 5 of said Newton Addition;

THENCE South 88° 16' 06" East along the South lines of the North half of Lot 5, North half of Lot 4, North half lot 3, North half of Lot 2, and the Northwest quarter of Lot 1 of said Newton Addition 2136.67 feet to the Southeast corner of the Northwest quarter of Lot 1 of said Newton Addition;

THENCE North 01° 43' 50" East along the East line of the Northwest quarter of said Lot 1 of Newton Addition 474.11 feet to the South line of the McAllister D.L.C.;

THENCE South 88° 29' 04" East along the South line of said D.L.C. 227.44 feet to the Southeast corner thereof;

THENCE North 01° 59' 43" East along the East line of said D.L.C. 492.81 feet to the Northwest corner of the Napoleon McGilvery D.L.C.;

THENCE North 02° 07' 55" East along the East line of said McAllister D.L.C. 1698.33 feet;

THENCE North 87° 52' 05" West 48.47 feet to a 1/2" iron rod set by Olson Engineering;

THENCE North 05° 40' 25" West 37.37 feet to a 1/2" iron rod set by Olson Engineering;

THENCE North 28° 28' 05" West 41.83 feet to a 1/2" iron rod set by Olson Engineering;

~~THENCE North 45° 15' 28" West 52.88 feet to a 1/2" iron rod set by Olson Engineering;~~

THENCE North 68° 47' 29" West 46.58 feet to a 1/2" iron rod set by Olson Engineering;

THENCE North 89° 04' 51" West 99.87 feet to a 1/2" iron rod set by Olson Engineering;

THENCE North 00° 00' 24" East 106.08 feet to a 1/2" iron rod set by Olson Engineering;

THENCE North 86° 10' 54" West 107.89 feet to a 1/2" iron rod set by Olson Engineering;

THENCE North 89° 03' 07" West 150.73 feet to a 1/2" iron rod set by Olson Engineering;

THENCE North 88° 22' 33" West 192.80 feet to a 1/2" iron rod set by Olson Engineering;

THENCE North 89° 30' 03" West 50.91 feet to a 1/2" iron rod set by Olson Engineering;

~~THENCE South 87° 58' 15" West 130.06 feet to a 1/2" iron rod set by Olson Engineering;~~

THENCE South 75° 26' 45" West 30.55 feet to a 1/2" iron rod set by Olson Engineering;

THENCE South 87° 53' 45" West 20.26 feet to a 1/2" iron rod set by Olson Engineering;

THENCE South 72° 27' 01" West 52.91 feet to a 1/2" iron rod set by Olson Engineering;

THENCE South 88° 51' 39" West 54.74 feet to a 1/2" iron rod set by Olson Engineering;

THENCE South 88° 51' 39" West 54.45 feet to a 1/2" iron rod set by Olson Engineering;

THENCE South 00° 49' 51" West 167.05 feet to a 1/2" iron rod set by Olson Engineering;

THENCE North 88° 47' 08" West 100.64 feet to a point on the East line of that tract described in Exhibit \_\_\_\_\_ of the Boundary Agreement recorded in Clark County Auditor's File \_\_\_\_\_;

THENCE South 02° 21' 26" West along said East line 132.00 feet to the Southeast corner of that tract described in said Exhibit;

~~THENCE North 87° 51' 35" West along the South line of that tract described in said Exhibit 732.15 feet;~~

THENCE South 07° 18' 23" West 580.41 feet to a 1/2" iron rod set by Olson Engineering;

THENCE South 88° 29' 24" East 111.86 feet to a 1/2" iron rod set by Olson Engineering;

THENCE South 76° 57' 08" East 205.44 feet to a 1/2" iron rod set by Olson Engineering;

THENCE South 89° 23' 23" East 317.09 feet to a 1/2" iron rod set by Olson Engineering;

THENCE South 00° 10' 35" East 292.10 feet to a 1/2" iron rod set by Olson Engineering;

THENCE South 85° 55' 15" West 149.19 feet to a 1/2" iron rod set by Olson Engineering;

THENCE South 02° 40' 38" West 364.07 feet to a 1/2" iron rod set by Olson Engineering;

THENCE South 88° 02' 47" East 328.78 feet towards a 1/2" iron rod set by Olson Engineering to a point that bears North 02° 07' 55" East from the Northeast corner of that property conveyed to Felix and Bonnie Fleischer by deed recorded in Clark County Auditor's File No. 8403160018;

THENCE South 02° 07' 55" West 34.69 feet to the Northeast corner of said Fleischer tract;

THENCE South 02° 07' 55" West along the East line of said Fleischer tract 219.37 feet;

THENCE continuing along the East line of said Fleischer tract South 01° 59' 43" West 127.18 feet to the Southeast corner thereof;

THENCE North 88° 29' 04" West along the South line of said Fleischer tract 1182.85 feet to the West line of the McAllister D.L.C. and the Southwest corner of said Fleischer tract;

THENCE South 02° 09' 58" West along the West line of said D.L.C. 60.00 feet to the North line of that tract conveyed to Neil D. McPherson by deed recorded under Auditor's File #8703170208 of Clark County records;

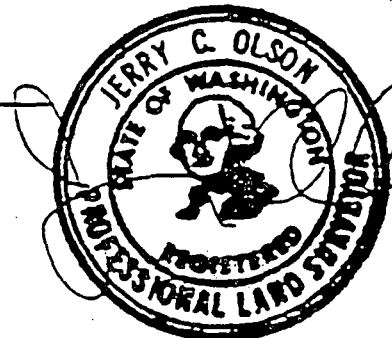
THENCE South 88° 29' 04" East along said North line 90.01 feet to the East line of said McPherson tract;

~~THENCE South 02° 09' 58" West along said East line 80.01~~  
feet to the South line of said McPherson tract;

THENCE North 88° 29' 04" West along the South line of  
said McPherson tract 90.01 feet to the West line of said  
McAllister D.L.C;

THENCE South 02° 09' 58" West along said West line  
236.55 feet to the POINT OF BEGINNING.

EXCEPT any portion thereof lying in N.E. 9th Avenue.



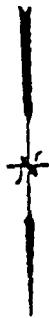
12/5/88

SURVEY IN THE

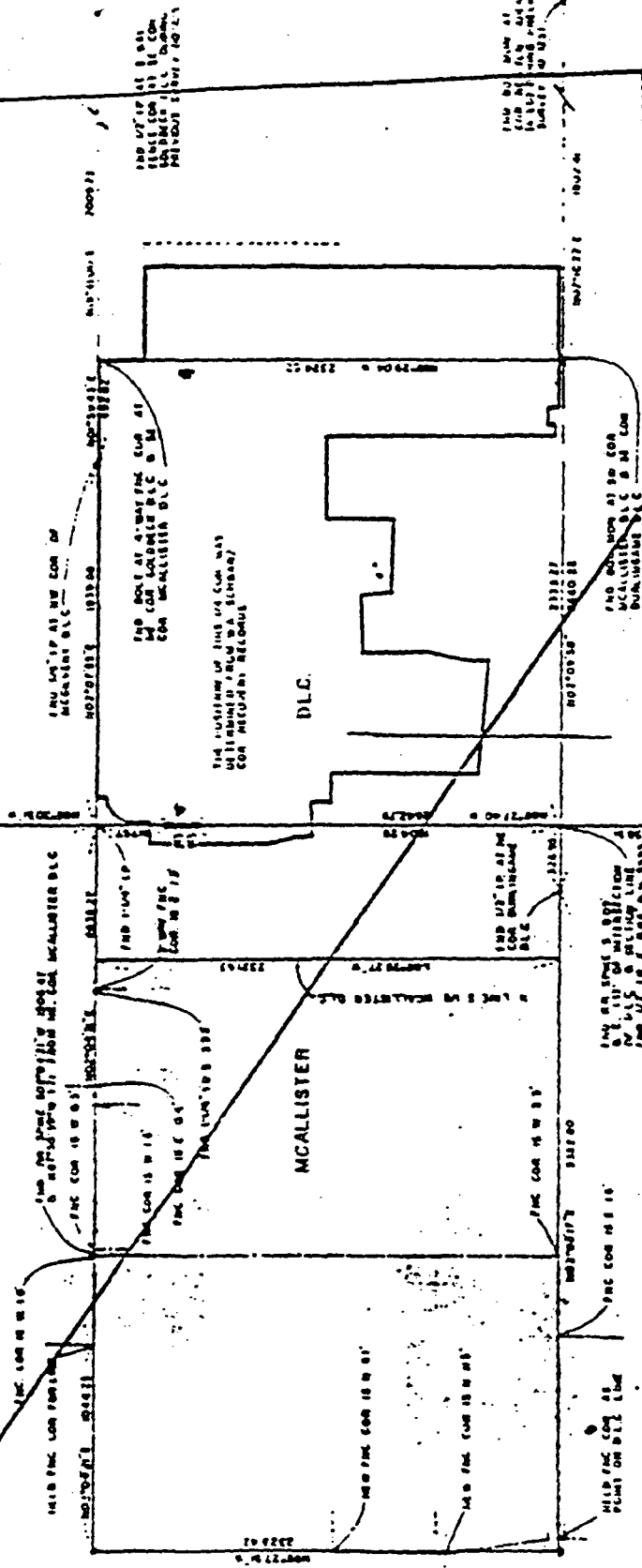
J. MCALLISTER D.L.C. & WM. GOLDBECK D.L.C.

IN  
SEC. 4, T2N, R2E & THE N 1/2 OF  
SEC. 33, T3N, R2E, WM.

CLARK COUNTY



ALL OF THE ABOVE DESCRIBED FOR  
SURVEY BY THESE TWO MEASURES  
IN 1880 IN PART 11



SURVEYOR'S CERTIFICATE

AUDITOR'S CERTIFICATE



**OLSON**  
PRINTING  
CLARK COUNTY, WYOMING



**RECEIVED**

**LEGAL DESCRIPTION FOR LEICHNER**  
**Landfill Transfer to Clark County**

AUG 13 1993

October 27, 1992

Clark County  
Community Dev/Public Works

A parcel of property in the James McAllister and in the William Goldbeck Donation Land Claim and in a portion of the Newton Addition as recorded in Book A of Plats at page 60 of Clark County records, in the North half of Section 4, Township 2 North, Range 2 East and in the South half of Section 33, Township 3 North, Range 2 East of the Willamette Meridian described as follows:

COMMENCING at the Southwest corner of said McAllister Donation Land Claim;

THENCE North 02° 09' 58" East along the West line of said McAllister Donation Land Claim 753.11 feet to the North line of that tract conveyed to Felix F. Fieischer by deed recorded under Auditor's File # 8403160018 of Clark County records;

THENCE South 88° 29' 04" East along said North line 850.15 feet to the TRUE POINT OF BEGINNING;

THENCE North 04° 03' 55" East 157.74 feet;

THENCE North 05° 00' 52" West 62.39 feet;

THENCE North 09° 23' 06" East 45.95 feet;

THENCE North 21° 38' 11" East 73.95 feet;

THENCE North 03° 53' 37" West 95.70 feet;

THENCE South 88° 55' 24" East 95.97 feet;

THENCE North 04° 57' 43" East 277.44 feet;

THENCE North 89° 23' 23" West 301.36 feet;

THENCE North 76° 57' 08" West 205.44 feet;

THENCE North 88° 29' 24" West 111.86 feet;

THENCE North 07° 18' 23" East 580.41 feet to the South line of the Kuhnhausen parcel as described in Exhibit D of the boundary line agreement recorded under Auditor's File # 9108090261 of Clark County records;

THENCE South 87° 51' 35" East along said South line 732.16 feet to the East line of said Kuhnhausen parcel;

*Long*  
 9/16/93

THENCE North 02° 21' 36" East along said East line 380.79 feet to the Northeast corner of said Kuhnhausen parcel;

THENCE North 02° 21' 36" East 103.27 feet;

THENCE North 89° 50' 17" East 263.64 feet;

THENCE South 79° 14' 48" East 288.86 feet;

THENCE South 87° 14' 12" East 133.24 feet;

THENCE South 85° 56' 14" East 199.37 feet;

THENCE North 45° 17' 17" East 77.77 feet;

THENCE North 89° 42' 20" East 238.67 feet to the East line of said McAllister Donation Land Claim;

THENCE South 02° 04' 21" West along said East line 231.02 feet;

THENCE South 02° 07' 55" West along said East line 1839.88 feet to the Northwest corner of the Napoleon McGilvery Donation Land Claim;

THENCE South 01° 59' 43" West along said East line 492.82 feet to the Southeast corner of said McAllister Donation Land Claim;

THENCE North 88° 29' 04" West along the South line of said McAllister Donation Land Claim 227.44 feet to the Northeast corner of the Northwest quarter of Lot 1 of the Newton Addition;

THENCE South 01° 43' 50" West along the East line of said Northwest quarter 473.72 feet to that line established by boundary agreement as recorded under Auditor's File # 9108090260 of Clark County records;

THENCE North 88° 16' 04" West along said boundary agreement line 981.21 feet;

THENCE South 01° 43' 50" West along said boundary agreement line 0.41 feet to the South line of the North half of Lot 3 of said Newton Addition;

THENCE North 88° 16' 06" West along said South line and the South lines of the North half of Lot 4 and the North half of Lot 5 of said Newton Addition 1119.46 feet to the centerline of NE 94th Ave;

THENCE North 02° 10' 22" East along said centerline 466.22 feet to the Southwest corner of the McAllister Donation Land Claim;

THENCE North 02° 09' 58" East along the West line of said McAllister Donation Land Claim 236.55 feet to the Southwest corner of that tract conveyed to Arvid E Koski by deed recorded under Auditor's File # G 18438 of Clark County records;

THENCE South 88° 29' 04" East along the South line of said Koski tract 90.00 feet to the Southeast corner thereof;



THENCE North  $02^{\circ} 09' 58''$  East along the East line of said Koski tract 80.01 feet to the Northeast corner thereof;

THENCE North  $88^{\circ} 29' 04''$  West along the North line of said Koski tract 90.00 feet to the West line of said McAllister Donation Land Claim;

THENCE North  $02^{\circ} 09' 58''$  East along said West line 60.00 feet to the South line of said Fleischer tract;

THENCE South  $88^{\circ} 29' 04''$  East along said South line 1157.05 feet to a fence line;

THENCE North  $01^{\circ} 43' 14''$  East along said fence line 376.53 feet to the North line of said Fleisher tract;

THENCE North  $88^{\circ} 29' 04''$  West along said North line 303.98 feet to the TRUE POINT OF BEGINNING.



8/11/93

COPY  
ORIGINAL FILED

JUL 17 1996

JoAnne McBride, Clerk, Clark Co.

IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON  
FOR THE COUNTY OF CLARK

STATE OF WASHINGTON,  
DEPARTMENT OF ECOLOGY,

Plaintiff,

v.

LEICHNER BROTHERS LAND  
RECLAMATION CORPORATION,

Defendant.

96 2 03081 7

NO.

DECLARATION OF  
REBECCA S. LAWSON

I, Rebecca S. Lawson, declare as follows:

1. I am over twenty-one years of age and am competent to testify herein. The facts set forth in this Declaration are from my own personal knowledge.

2. I am an Environmental Engineer 3 for the Department of Ecology, and am assigned to the Toxics Cleanup Program in the Southwest Regional Office. On behalf of the Department of Ecology, I participated in the negotiations that led to the Consent Decree being presented to the Court.

3. The Consent Decree was the subject of public notice and a public meeting as required by RCW 70.105D.040(4)(a). Ecology received written comments but no oral comments on the proposed Consent Decree.

4. I responded to each of the comments received by way of personal letter to the commenter. Copies of each comment letter received, and of my response, are attached to this Declaration.

DECLARATION OF  
REBECCA S. LAWSON - 1

ATTORNEY GENERAL OF WASHINGTON  
Ecology Division  
PO Box 40117  
Olympia, WA 98504-0117  
FAX (360) 438-7743

1           5.       Certain changes were made to the Consent Decree as a result of the  
2 comments received. These changes are described in the response letters attached to this  
3 Declaration.

4           I declare under penalty of perjury under the laws of the State of Washington that the  
5 foregoing is true and correct.

6  
7 Rebecca S. Lawson  
8 Signature

6/5/96 Lacey, Wash.  
Date and Place

STATE REPRESENTATIVE  
17th DISTRICT  
MARC BOLDT

State of  
Washington  
House of  
Representatives



FINANCE  
VICE CHAIRMAN  
CHILDREN & FAMILY SERVICES  
AGRICULTURE

January 30, 1996

Department of Ecology  
Director - Ecology Southwest Regional Office  
Toxics Cleanup Program  
510 Desmond Drive Southeast  
P.O. Box 47775  
Olympia, Washington 98504-7775

To Whom It May Concern,

I am acquainted with the Leichner Landfill, however, I still refer to it as the "5 curves dump". I would like to know what the plans are when a determination has been made that the wells in the area are contaminated . . . and if the wells in the area are being monitored for contamination, as well as for other problems related to the landfill, such as rodents and other related problems.

Thank you for your time, and please don't hesitate to call me if you have any concerns or questions.

A handwritten signature in cursive script, appearing to read "Marc Boldt".

Marc Boldt  
STATE REPRESENTATIVE  
17th District of the State of Washington



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

February 20, 1996

The Honorable Marc Boldt  
House of Representatives  
335 John L. O'Brien Building  
Olympia, WA 98504-0600

Dear Representative Boldt:

I am writing in response to your January 30, 1996, letter concerning Leichner Landfill. Enclosed for your information is a Fact Sheet for Leichner Landfill which summarizes actions taken at the landfill, and the currently proposed Consent Decree for long-term monitoring and maintenance of the closed facility.

Ground water beneath the landfill has been monitored since 1987. Historical data from ground water monitoring wells indicate elevated levels of inorganic water quality parameters (such as chloride, calcium, and ammonia), volatile organic compounds (VOCs), iron, and manganese. This contamination was caused by leachate generated from precipitation infiltrating through refuse in the landfill. Final closure of the landfill with an engineered composite cover system occurred in 1992. Ground water monitoring data collected since landfill closure reflect a significant decrease in contaminant concentrations, indicating that the cover system is minimizing leachate generation. Quarterly ground water monitoring will continue at the landfill to ensure that the cover system functions properly.

Concerns about the quality of drinking water near the landfill were addressed by the Domestic Well Canvass conducted in 1993. The Canvass included a door-to-door survey of over 700 residences to determine the number and locations of domestic supply wells located near Leichner Landfill. Ground water samples were collected and analyzed from fifteen domestic wells and two irrigation wells. None of the test results exceeded primary or secondary drinking water standards. The survey also confirmed that the majority of neighboring homes are now supplied water by the City of Vancouver.

Prior to the 1993 Domestic Well Canvass, some domestic supply wells near the landfill had been periodically sampled, but the actual number of nearby residences still using domestic supply wells was not known. In April 1987, four domestic wells adjacent to the landfill were sampled by the Southwest Washington Health District (SWHD). Two of these wells were found to contain levels of VOCs which exceeded drinking water standards. These wells were taken out of service and replaced with water supplied by the City of Vancouver. Additional domestic wells near the landfill were sampled in 1989 by the Washington State Department of Health, and again in 1991 by the Washington State Department of Ecology. None of these test results exceeded primary or secondary drinking water standards.

To my knowledge, there are no other problems related to the landfill. Since landfill closure in 1992, there have been no problems with rodents or other vectors.

January 30/96

Requesting information  
about Heichner Brothers  
Landfills in Orchard - Clark  
County.

The flare stations on  
site what type of control  
on stacks - how long -  
20 yrs? What is happening  
to the Contamination of Aquifer?  
Is the Browning Ferris Incinerator  
going to be open landfill?

Boomerak - new site?  
Are you measuring it?  
G. Dick

2410 SE Bay Point Dr #63  
Vancouver, Wa 98682



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

March 12, 1996

P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

J. Clish  
2410 SE Bay Point Dr. #63  
Vancouver, WA 98683

Dear J. Clish:

Re: Leichner Landfill

I am writing in response to your January 30, 1996, letter requesting information about Leichner Landfill. Enclosed for your information is a Fact Sheet for Leichner Landfill which summarizes actions taken at the landfill, and the currently proposed Consent Decree for long-term monitoring and maintenance of the closed facility.

Presented below are your questions about Leichner Landfill followed by my responses:

1. "The flare stations on site what type of control on stacks - how long - 20 yrs?"

There are two separate landfill gas collection and flaring systems. Both systems include an enclosed ground flare. Flare stack emissions are monitored as required in a permit issued by the Southwest Washington Air Pollution Control Agency. Facility maintenance and monitoring activities are required continue for "at least a twenty-year period, or until the site becomes stabilized (i.e., little or no settlement, gas production or leachate generation), and monitoring of ground water, surface water, and gases can be safely discontinued".

2. "What is happening to the contamination of Aquifer?"

As described in the enclosed Fact Sheet, ground water was contaminated by leachate produced from rain infiltrating through refuse. Ground water monitoring results indicate that the cover system has minimized leachate generation. No contaminants were detected above drinking water standards in any of the domestic wells sampled near the landfill.

3. "Is the Browning-Ferris Industries going to reopen the landfill?"

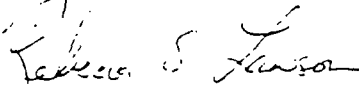
No, the landfill will not be reopened. It is my understanding that Browning-Ferris Industries is buying the refuse hauling business, The Disposal Group, which operates out of a portion of the Leichner Landfill property. However, the refuse hauling business has no impact on the closed landfill. Browning-Ferris Industries will continue to operate the refuse hauling business from this location.

4. "Boomsnub new site - are you monitoring it?"

As an active facility, Boomsnub Inc. is regulated by the Hazardous Waste and Toxics Reduction Program. To find out more about what monitoring is required, please call Karen Michelena at (360) 407-7248.

If you have any additional questions, please call me at (360) 407-6255.

Sincerely,

  
Rebecca S. Lawson, P.E.  
Project Manager  
Toxics Cleanup Program  
Southwest Regional Office

RSL:jr  
Enclosure

cc: Karen Michelena, Ecology

# HELLER EHRMAN WHITE & MCAULIFFE

ATTORNEYS

A PARTNERSHIP OF PROFESSIONAL CORPORATIONS

6100 COLUMBIA CENTER  
701 FIFTH AVENUE  
SEATTLE  
WASHINGTON 98104-7098  
FACSIMILE (206) 447-0849  
TELEPHONE (206) 447-0900  
LESLIE C. NELLERMOR

February 22, 1996

ANCHORAGE  
LOS ANGELES  
PALO ALTO  
PORTLAND  
SAN FRANCISCO  
TACOMA

14937-0005

(206) 389-6130

## VIA OVERNIGHT MAIL

Tanya Barnett  
Assistant Attorney General  
Department of Ecology Division  
629 Woodland Square Loop SE  
Lacey, WA 98503

Rebecca Lawson  
Project Manager  
Department of Ecology  
Southwest Regional Office  
510 Desmond Drive  
Lacey, WA 98503

Re: Leichner Comments on Proposed Consent Decree for  
Leichner Landfill, Clark County, Washington

Dear Ms. Barnett and Ms. Lawson:

Heller, Ehrman, White & McAuliffe has represented Leichner Brothers Land Reclamation Corp. ("Leichner") in connection with remedial action at the Leichner Landfill in Clark County Washington for a number of years. We offer comments on certain provisions of the proposed Consent Decree.

As an initial matter, we wish to thank you for your efforts in the negotiation of this decree. Your willingness to devote resources to this project is appreciated.

With regard to the Consent Decree, we offer the following specific comments with reference to the section in which they apply:

Section VI.B. Role of Health District Leichner would like to see the memorandum of understanding between Ecology and the Southwest Washington Health District before it signs the Consent Decree. We understand that it has not yet been finalized, and



Tanya Barnett  
February 22, 1996  
Page 2

encourage you to proceed with the memorandum as quickly as possible.

Section VII. D. Designated Project Coordinators Please add a second project coordinator for Leichner, Craig Leichner. His address is

Craig Leichner  
Leichner Brothers Land Reclamation Corp.  
9411 NE 946th Avenue  
Vancouver, WA 98666  
Phone: (360) 892-9594  
Fax: (360) 892-8471

Section IX. Access If the Health District will be the primary regulator for the landfill, they should have access to the site for purposes of taking samples and verifying the work done. The post-closure permit may provide access for the Health District, but we have not yet seen it. In the interim, it seems appropriate to extend access to the site to the Health District.

Section XI. Progress Reports Following on the previous comment, it is appropriate to require the submittal of progress reports directly to the Health District.

Section XIII.B. Transfer of Interest in Property This section specifically refers to an option agreement in favor of Clark County that may result in the transfer of ownership from Leichner to the County in the future. Leichner requests the addition of a specific reference to two additional transfers of interest in the property. Proposed language follows:

The parties acknowledge that the Disposal Group has used part of the Site for activities related to the collection of solid waste in Clark County and that Leichner intends to lease a portion of the property to BFI, successor in interest to the Disposal Group, to be used for collection company activities of the same sort. The parties also acknowledge that the Disposal Group has leased a portion of the Site to Air Water and Earth, a recycling company, and intends to renew that lease. No further notice to Ecology is required for these transactions.

Section XV. Amendment of Consent Decree Leichner does not presently anticipate requesting amendments to the Consent Decree.

Tanya Barnett  
February 22, 1996  
Page 3

Nevertheless, Leichner is concerned that Ecology's time for reviewing such requests be limited. Accordingly, we propose the following changes to the second and third sentences of this section.

Ecology shall indicate its approval or disapproval within fourteen (14) days after the request for amendment is received. If Ecology does not respond within fourteen (14) days, the request for amendment shall be deemed approved by Ecology, and Leichner shall be entitled to submit the amendment to the Court for approval without any further action by Ecology.

Section XIX. Land Use Restrictions As drafted, the Consent Decree requires Ecology to approve the removal of deed restrictions when the site is stabilized. Given the role the Health District will play at this site, it appears more appropriate to require Health District approval of the change in status.

Section XXX. Claims Against the State Leichner proposes to delete the phrase, "or any of its agencies," from the first sentence. We may wish to pursue contribution claims against local governments and are concerned the current language could arguably limit our ability to do so.

Section XXIV. Financial Assurance As you know, Leichner, Clark County and the City of Vancouver are discussing revisions to the Disposal Agreement. The result of the negotiations may be a change in the manner in which the Financial Assurance Reserve Fund (described in the Disposal Agreement,) is held. To avoid amendment of the Consent Decree, we propose adding the phrase, "or another financial assurance mechanism acceptable to Ecology" to the end of the second sentence.

In addition, we offer one comment on the Cleanup Action Plan, Exhibit B to the Consent Decree. On page 5, in section 5.1, we request the following revision to the first sentence of the second paragraph, "A variety of VOCs were historically present in the Alluvial aquifer downgradient of the landfill." We believe this more accurately describes the conditions at the site.

Tanya Barnett  
February 22, 1996  
Page 4

Thank you for considering these comments. Please feel free to call me should you have questions or concerns about any of them.

Very truly yours,

HELLER, EHRLMAN, WHITE & MCAULIFFE



Leslie C. Nellermoe

LCN/lal  
cc: Craig Leichner  
Steve Horenstein  
Kevin Lakey  
Mark Myers

I:\LCN\LBLR\9612.LL



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

May 20, 1996

Ms. Leslie Nellermoe  
Heller, Ehrman, White & McAuliffe  
6100 Columbia Center  
701 Fifth Avenue  
Seattle, WA 98104-7098

Dear Ms. Nellermoe:

Re: Response to Comments on Proposed Consent Decree for Leichner Landfill

This is in response to your letter of February 22, 1996, in which you provided comments on the proposed consent decree for the Leichner Landfill. As we have previously discussed by telephone, Ecology agrees that many of the changes you proposed are appropriate, and has incorporated them into the decree. Specifically, we have made the changes you proposed in Section VII.D regarding Designated Project Coordinators, in Section IX regarding Access, in Section XI regarding Progress Reports, in Section XXIII regarding Claims Against the State, and in Section XXIV regarding Financial Assurance.

Ecology agrees generally with the revisions you proposed to three other sections of the decree, but believes minor rewording is necessary. Ecology will change Section XIII.B regarding Transfer of Interest in Property to read as follows:

The parties acknowledge that the Disposal Group, a group of solid waste collection companies affiliated with Leichner currently operating in Clark County, has used part of the Site for activities related to the collection of solid waste in Clark County. The parties further acknowledge that Leichner intends to lease a portion of the Site to BFI, a solid waste management company, to be used for collection company activities of the same sort conducted by the Disposal Group. The parties further acknowledge that Leichner has leased a portion of the Site to Air, Water and Earth, a recycling company, and intends to renew that lease. No further notice to Ecology is required for these transactions.

Ecology will change Section XV regarding Amendment of Consent Decree to read as follows:

Leichner's request shall refer to this section of the Decree, and shall notify Ecology that a response is due within the time periods specified in this paragraph. Ecology shall respond to the request within twenty-one (21) days after the request for amendment is received. In its response, Ecology shall either approve the request, disapprove the request, or specify a date by which Leichner may expect to receive an approval or disapproval. The date specified by Ecology shall be no more than forty-five (45) days after Ecology's receipt of Leichner's request, unless the parties agree to a longer period. Reasons for disapproval shall be stated in writing. If Ecology

Leslie Nellermoe  
May 20, 1996  
Page 2

disapproves any proposed amendment, the disagreement may be addressed through the dispute resolution procedures described in Section XIV of this Decree.

Finally, Ecology will change Section XIX regarding Land Use Restrictions to read as follows:

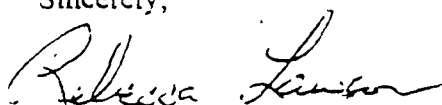
Leichner agrees that the restrictive covenant, attached hereto as Exhibit C and by this reference incorporated herein, shall be recorded with the office of the Clark County Auditor within 10 days of the entry of this Decree and shall restrict future uses of the Site. After completion of the remedial action required by this Decree, and when the criteria in WAC 173-340-440 are met, the Health District may recommend to Ecology that the restrictive covenant be removed. With Ecology's prior written approval, Leichner, or its successor(s), may record an instrument that provides that the restrictive covenant provided in Exhibit C shall no longer limit uses of the Site or be of any further force or effect.

Your comment letter made two other requests. First, you asked to see a copy of the Memorandum of Understanding between Ecology and the Southwest Washington Health District. A copy was sent to you for review and comment.

Second, you asked that language in the first sentence of the second paragraph in section 5.1 of the Cleanup Action Plan be modified. Ecology does not agree that your suggested changes are more accurate than the statement as currently drafted. Therefore, we have left the sentence as is.

It is my understanding that Ecology and Leichner Brothers Land Reclamation Corporation are now in agreement as to all of the changes referred to in this letter. Thank you for your comments. I hope this responds adequately to the concerns you raised.

Sincerely,



Rebecca Lawson, P.E.  
Toxics Cleanup Program  
Southwest Regional Office

RL:jr



**DEPARTMENT OF  
PUBLIC WORKS**

**DESIGN & ENGINEERING  
ENVIRONMENTAL SERVICES**

*Superior service that is responsive and cost justified.*

February 23, 1996

Rebecca Lawson  
Ecology Southwest Regional Office  
Toxics Cleanup Program  
510 Desmond Drive SE  
P.O. Box 47775  
Olympia, WA 98504-7775

RE: Leichner Landfill Consent Decree

Dear Rebecca:

Clark County has reviewed the draft consent decree and offers the following comments for consideration:

1. Page 9, line 14. Appears that Section XI should be referenced instead of Section X.
2. Page 11, lines 21-24. Enclosed for your files and attachment as Exhibit D is a copy of the final executed and recorded Option Agreement referenced. The version currently shown as Exhibit D is an unexecuted draft version.
3. Page 19, line 9. Appears that Section XVII should be referenced instead of Section XVI.

Clark County appreciates your and Ecology's efforts over the past several years to get us to this point. We look forward to the consent decree being finalized in a timely manner and closing this particular chapter in the long history of the Leichner Landfill.

Please feel free to call me at 737-6118; extension 4484 should there be any questions or I can be of further assistance.

Very truly yours,

Brian K. Carlson,  
Environmental Services Manager

Attachment

cc: Bronson Potter  
Gary Bickett, SWHD

1300 ESTHER STREET • P.O. BOX 9810 • VANCOUVER, WASHINGTON 98666-9810



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3  
4 IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON  
5 FOR THE COUNTY OF CLARK

6  
7 STATE OF WASHINGTON,  
8 DEPARTMENT OF ECOLOGY,

9 Plaintiff,

10 v.

11 LEICHNER BROTHERS LAND  
12 RECLAMATION CORPORATION,

13 Defendant.

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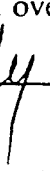
NO. \_\_\_\_\_

ORDER ENTERING CONSENT  
DECREE

14 Having reviewed the Consent Decree signed by the parties to this matter, the Joint  
15 Motion for Order Entering Consent Decree, the Declaration of Rebecca S. Lawson, and the  
16 file herein, it is hereby

17 ORDERED AND ADJUDGED that the Consent Decree in this matter is Entered  
18 and that the Court shall retain jurisdiction over the Consent Decree to enforce its terms.

19 DATED this 17 day of July, 1996.

20 

21 JUDGE/COMMISSIONER  
22  
23  
24  
25  
26

ORDER ENTERING  
CONSENT DECREE - 1

ATTORNEY GENERAL OF WASHINGTON  
Ecology Division  
PO Box 40117  
Olympia, WA 98504-0117  
FAX (360) 438-7743

1 Presented by:

2 CHRISTINE O. GREGOIRE  
3 Attorney General

4 *Tanya Barnett*

5 TANYA BARNETT, WSBA #17491  
6 Attorney for Department of Ecology  
(360) 459-6157

7  
8 APPROVED FOR ENTRY AND NOTICE  
9 OF PRESENTATION WAIVED:

10 *Leslie C. Nellermoe*  
11 LESLIE C. NELLERMOE, WSBA # 8758  
12 Attorney for Leichner Brothers Land  
Reclamation Corp.  
(206) 447-0900

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ORDER ENTERING  
CONSENT DECREE - 2

ATTORNEY GENERAL OF WASHINGTON  
Ecology Division  
PO Box 40117  
Olympia, WA 98504-0117  
FAX (360) 438-7743



COPY  
ORIGINAL FILED

JUL 17 1996

JoAnne McBride, Clerk, Clark Co.

IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON  
FOR THE COUNTY OF CLARK

STATE OF WASHINGTON,  
DEPARTMENT OF ECOLOGY,

Plaintiff,

v.

LEICHNER BROTHERS LAND  
RECLAMATION CORPORATION,


Defendant.

96 2 03081 7

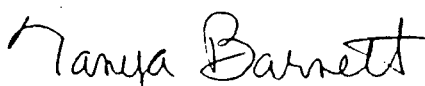
NO. \_\_\_\_\_

JOINT MOTION FOR ORDER  
ENTERING CONSENT  
DECREE

The parties to this action hereby jointly move for entry of the Consent Decree in the above-entitled matter. The Consent Decree has been signed by the parties to this action, and has been the subject of public notice and a public hearing.

  
LESLIE C. NELLERMOE, WSBA # 8758  
Attorney for Leichner Brothers Land  
Reclamation Corp.

Date 6/21/96

  
TANYA BARNETT, WSBA # 17491  
Attorney for Department of Ecology  
Date June 25, 1996

JOINT MOTION FOR ORDER  
ENTERING CONSENT DECREE - 1

ATTORNEY GENERAL OF WASHINGTON  
Ecology Division  
PO Box 40117  
Olympia, WA 98504-0117  
FAX (360) 438-7743

EXHIBIT F

PUBLIC PARTICIPATION PLAN  
LEICHNER BROTHERS LANDFILL  
REMEDIAL ACTION  
VANCOUVER, WASHINGTON

Washington Department of Ecology  
Southwest Regional Office  
Toxics Cleanup Program  
Olympia, Washington

January 1996

## **I. INTRODUCTION AND OVERVIEW OF PUBLIC PARTICIPATION PLAN**

The Washington Department of Ecology is committed to providing public participation opportunities during the investigation and cleanup of this hazardous waste site. The public participation plan is intended to promote public understanding of Ecology's responsibilities, planning activities, and remedial activities at hazardous waste sites. It also provides an opportunity for Ecology to learn, from the public, information that will enable Ecology to develop a comprehensive cleanup plan that is protective of both human health and the environment. This public participation plan is an amended version of the May 1993 public participation plan.

- A. This public participation plan for the Leichner Brothers Landfill hazardous waste cleanup site covers activities in the implementation of a consent decree for remedial action. It has been tailored to the needs of the public based on the stage and nature of the cleanup, the level of public concern, and the risks posed by the site.
- B. The Leichner Brothers Landfill has been a municipal solid waste landfill (100 acres) since approximately 1940. It is owned and operated by Leichner Brothers Land Reclamation Corporation (LBLRC). Until the mid-1960's, waste received at the landfill was burned. Since then, waste received at the landfill has been compacted and covered with soil. The landfill accepted municipal solid waste from the cities and towns in Clark County as well as from the unincorporated areas of the county. The landfill stopped receiving waste at the end of 1991 and was closed in November 1992.

Beginning in 1987, Ecology and LBLRC entered into a series of agreed orders to investigate contamination at the Leichner Brothers Landfill. A remedial investigation and feasibility study (RI/FS) was completed in April 1988. In April 1989, Ecology issued an order to LBLRC requiring further investigation and remediation of contaminated ground water. An amendment to this order, in June 1989, required a report on the on-going hydrogeology and treatability studies. In a second amendment to the April 1989 order, Ecology required further investigations, which are summarized in the October 1991 Remedial Investigation Amendment. Based on the technical information submitted by LBLRC, Ecology developed a draft cleanup action plan in early 1992, after which time, Ecology and LBLRC negotiated a consent decree that described the additional remedial actions that would be conducted at the landfill. The proposed consent decree and cleanup action plan went through a 30-day public comment period in July 1992. However, due to some legal uncertainties between LBLRC, the City of Vancouver and Clark County about cleanup costs, the 1992 consent decree was never finalized in court. Ecology proceeded with the agreed order so that cleanup could continue. This agreed order specified most of the same remedial actions proposed in the July 1992 consent decree.

The following reports have been completed by LBLRC:

*Leichner Landfill Remedial Investigation Report*, February 1988  
*Feasibility Study for the Leichner Landfill*, April 1988  
*Leichner Brothers Landfill Master Operations Plan*, February 1989  
*Interim Report Hydrogeologic Characterization and Pilot Treatment System*,  
November 1989  
*Technical Memorandum for Ground Water Treatment Alternatives*, March 1990  
*Technical Memorandum of Ground Water Modeling*, May 1990  
*Ground Water Treatment Bench-Scale Studies Report*, July 1990  
*Ground Water Treatment Pilot-Scale Study Experimental Plan*, October 1990  
*Ground Water Treatment Pilot-Scale Study Report*, September 1991  
*Remedial Investigation Report Amendment*, October 1991  
*Leichner Landfill Domestic Well Canvass Work Plan*, 1993  
*Leichner Landfill Domestic Well Canvass*, 1993  
*Construction Report, Leichner Brothers Landfill Closure*, 1993  
*Operation and Maintenance Manual for Leichner Brothers Landfill, Volume I:  
Landfill Gas Extraction System*, 1995  
*Operation and Maintenance Manual for Leichner Brothers Landfill, Volume II:  
Storm Water System and Final Cover System*, 1996

A number of remedial actions have been completed at the landfill. An engineered composite cap cover system was constructed over the landfill. In addition, a landfill gas control/recovery system was installed, a stormwater control system was implemented, a domestic well survey undertaken, and an alternate water supply provided.

Ecology will oversee the project and has responsibility for public participation. LBLRC assisted Ecology in preparing this public participation plan.

- C. This public participation plan outlines public participation activities to be conducted for the phases covered by this plan. This plan will be reviewed at each phase of cleanup, and amended or rewritten as appropriate.

The purpose of the public participation effort and of this plan is to ensure that the affected public and governmental agencies are kept informed as the remedial action proceeds, and that each has an opportunity to contribute information regarding the site, and to comment on the cleanup activities.

- D. This plan is divided into the following sections:

- II. Site Description
  - A. Land Use
  - B. Technical Aspects
- III. Community Background

- A.     Community Profile
- B.     Key Community Concerns

IV.    Public Participation Activities

- V.    Appendices:
- A.     Site Map
  - B.     Time Line
  - C.     Site Mailing List
  - D.     Update(s) to Public Participation Plan
  - E.     Glossary

II.    SITE DESCRIPTION

A.    Land Use

Currently, the site is bordered to the west, north, and east by residential development. LBLRC owns approximately 30 acres to the south of the landfill. The property and surrounding area are currently zoned single family residential - 7500 square feet per lot (R 1-7-5), with a small area east of Northeast 90th Street and 94th Avenue zoned light manufacturing. Historically, the surrounding area was primarily farm/agricultural land. However, over the years, it has become urbanized through the creation of medium to large residential lots. The surrounding area is within the urban growth boundary and residential development is expected to continue in this area.

B.    Technical Aspects

The geology in the vicinity of the landfill consists of alluvium (sand and gravel) to a depth of 70 to 100 feet, and the upper section of the Troutdale Formation, which consists of sand and gravel cemented in a matrix of silt. Water-bearing zones, or aquifers, are present in both the alluvium and the Troutdale Formation. Ground water flow in the aquifers is toward the south and southwest. The two aquifers appear to be locally interconnected southwest of the landfill.

Ground water quality in the alluvial aquifer, and to a lesser degree the Troutdale aquifer, has been impacted by the landfill. The alluvial aquifer displays elevated levels of constituents typical of municipal solid waste landfills including ammonia, iron, manganese, chloride, calcium, and specific conductance, as well as low levels of volatile organic compounds (VOCs). The Troutdale aquifer displays elevated levels of inorganic water quality parameters, including chloride, calcium, sulfate, and specific conductance. Low concentrations of VOCs (below drinking water standards and below MTCA cleanup levels) were detected in some domestic supply wells completed

in the Troutdale aquifer. These wells are located about 3000 feet southwest of the Leichner Landfill property and it is unclear from these data alone that the VOCs are from the landfill.

When Ecology initially considered the selection of a remedial action for this site in 1992, contaminant levels and technical considerations resulted in Ecology selecting ground water extraction and treatment as the remedial action. Since then, conditions at the landfill have changed. Capping the landfill has minimized the lateral and vertical migration of leachate by reducing the volume of leachate generated. Ground water contaminant concentrations have decreased to the point that an extraction and treatment system is no longer justified. Ongoing ground water monitoring is required, as is long-term maintenance of the cover system, the gas control system, and the storm water management system.

Leichner has agreed to apply for a post-closure permit from the Southwest Washington Health District. When the permit is in place, the Health District will supervise the monitoring and maintenance activities and the landfill with Ecology oversight.

### III. COMMUNITY BACKGROUND

#### A. Community Profile

Clark County's population is about 245,000. The property served as the only municipal landfill permitted within Clark County. The landfill closed on December 31, 1991 and the community now exports its solid waste to the Finley Buttes Landfill in Morrow County, Oregon.

The community is fairly concentrated near the urbanized areas, including Vancouver and the cities of Camas and Washougal. The property lies north of these urbanized areas, near Orchards. However, the urbanization has sprawled and residential housing borders three sides of the landfill.

#### B. Key Community Concerns

The key community concern is protection of drinking water quality. An alternate water supply has been provided to many of the homes in the area and all new homes in the vicinity will be connected to the municipal water system. The domestic well survey performed in 1993 investigated the impact of the landfill on nearby domestic wells.

### IV. PUBLIC PARTICIPATION ACTIVITIES

The public participation plan for the Leichner Brothers Landfill will consist of the following activities:

- A. A 30-day public comment period on the consent decree was held beginning January 24, 1996 and ending February 23, 1996.
- B. The potentially affected vicinity, which includes all properties around the perimeter of the site and any persons who may be directly affected by the site, as set forth in Appendix C, have been notified by mail.

The above have been identified as owning or leasing property immediately adjacent to the site. Those on the initial mailing list (refer to Appendix C) shall receive all site mailings. Anyone who requests to be placed on the site mailing list shall receive all future site mailings.

- C. The public may review the agreed order and the recent fact sheet at the following locations:

Patty Hill  
Washington Department of Ecology  
Southwest Regional Office - Central Files  
510 Desmond Drive/P.O. Box 47775  
Olympia, WA 98504-7775  
(360) 407-6365

Fort Vancouver Regional Library  
1007 East Mill Plain Boulevard  
Vancouver, WA 98663-3599  
(360) 695-1566

Clark County Public Utilities  
1408 Franklin Street  
Vancouver, WA 98660-2879  
(360) 699-2375

Southwest Washington Health District  
2000 Fort Vancouver Way  
Vancouver, WA 98663-3505  
(360) 696-8428

These documents are available for review during the public comment period. Anyone requesting a copy of these documents will be provided them by Ecology.

- D. All comments received will be retained in the Ecology Southwest Regional Office site files. Responses to comments received on documents circulated for public comment will be compiled in a "responsiveness summary" that will be sent to those who submit written comments and to the designated information

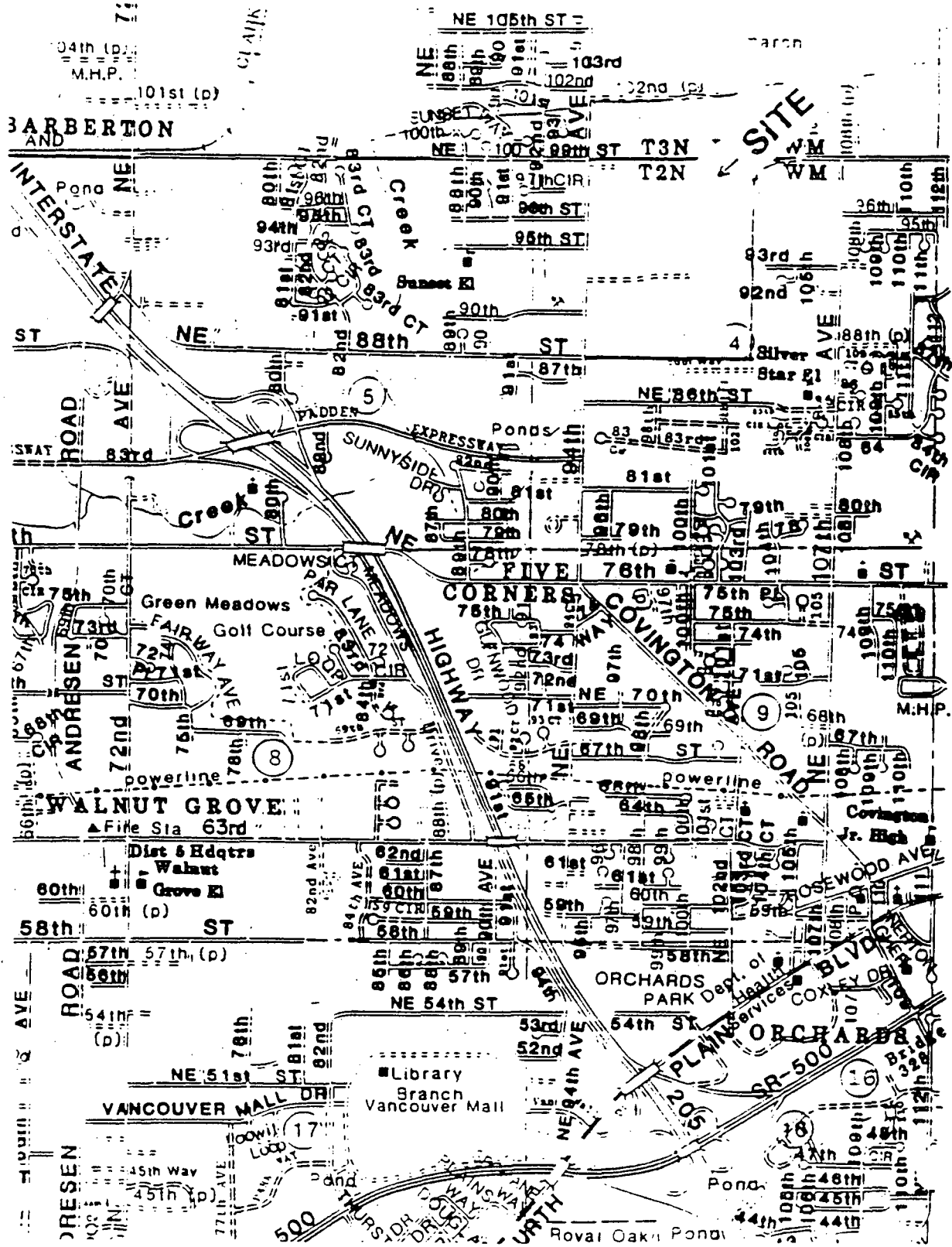
repositories. Notice of availability will be published in the Ecology Site Register.

- E. If there is a need for additional public participation activities, the public shall be notified through a legal notice in the Vancouver Columbian, and this public participation plan will be updated and delivered to the information repositories listed above.
- F. Public notice announcements regarding the site will be placed in the Ecology Site Register for each comment period. Notice was listed in the January 30, 1996 Site Register.



PUBLIC PARTICIPATION PLAN - APPENDIX A

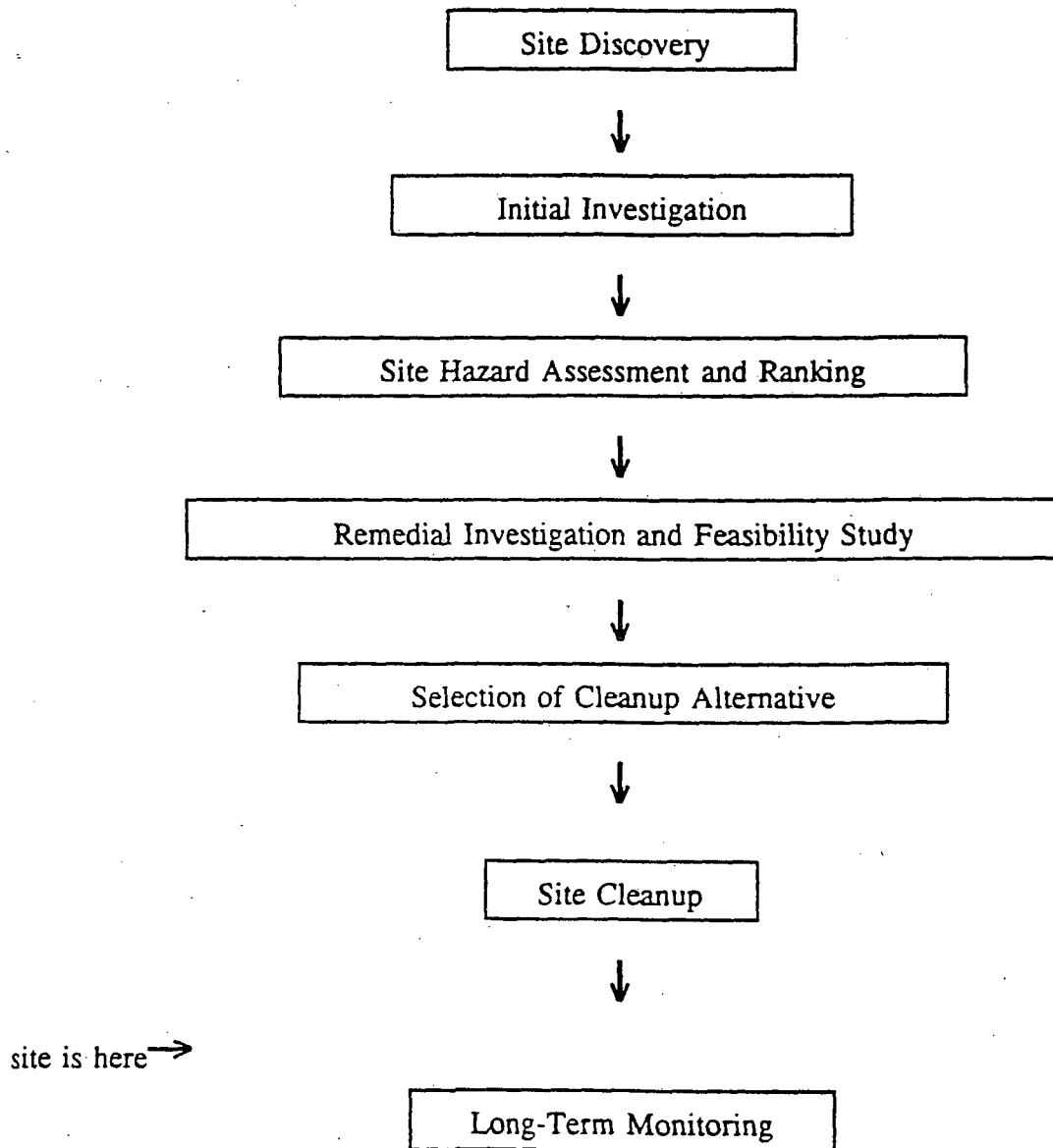
SITE MAP



## PUBLIC PARTICIPATION PLAN - APPENDIX B

### TIME LINE

Each of these steps take varying amounts of time ranging from less than one year to several years, depending on the complexity of the site.



PUBLIC PARTICIPATION PLAN - APPENDIX C

SITE MAILING LIST

- Site owners, operators (Leichner Brothers Land Reclamation Corporation)
- Potentially affected vicinity (including, but not limited to, adjacent property owners; see Section IV, B)
- Silver Star and Sunset Elementary Schools
- Nearby daycares
- City of Vancouver elected officials (mayor, city council, city commissioners, etc. in c/o city clerk's office)
- Clark County elected officials (county commissioners, etc. in c/o county clerk's office)
- Vancouver Fire District
- Southwest Washington Health District, Gary Bickett
- Port of Vancouver
- Vancouver Columbian, environmental reporter
- Local radio stations
- State legislators for Vancouver area
- Other interested citizens (Washington Environmental Council, local environmental groups, neighborhood associations, citizens' groups, anyone requesting to be placed on the site mailing list, etc.)
- Southwest Regional Citizens' Advisory Committee members
- WA Dept. of Health - Office of Toxic Substances
- Information repositories (see Section IV, C)
- Ecology Toxics Cleanup Program section heads
- Ecology Toxics Cleanup Program public participation staff (HQ and other regions)
- Ecology Toxics Cleanup Program PIO
- Ecology SWRO Regional Director/SWRO section heads
- Ecology Industrial Section (Paul Skyllingstad)
- Assistant Attorney General for the site, Tanya Barnett
- Ecology site manager, Rebecca Lawson
- PLP's, attorney(s), consultant(s)

PUBLIC PARTICIPATION PLAN - APPENDIX D

GLOSSARY

**Agreed order:** A legal document, issued by Ecology, which formalizes an agreement between Ecology and the potentially liable persons for the actions needed at a site. An agreed order may be used for all remedial actions except for non-routine cleanup actions and interim actions that constitute a substantial majority of a cleanup action likely to be selected. Since an agreed order is not a settlement, an agreed order shall not provide for mixed funding, a covenant not to sue, or protection from claims for contribution. An agreed order means that the potentially liable person agrees to perform remedial actions at the site in accordance with the provisions of the agreed order and that Ecology will not take additional enforcement action against the potentially liable person to require those remedial actions specified in the agreed order so long as the potentially liable person complies with the provisions of the order. Agreed orders are subject to public comment. If an order substantially changes, an additional public comment period is provided.

**Applicable state and federal laws:** All legally applicable requirements and those requirements that Ecology determines are relevant and appropriate requirements.

**Area background:** The concentrations of hazardous substances that are consistently present in the environment in the vicinity of a site which are the result of human activities unrelated to releases from that site.

**Carcinogen:** Any substance or agent that produces or tends to produce cancer in humans.

**Chronic toxicity:** The ability of a hazardous substance to cause injury or death to an organism resulting from repeated or constant exposure to the hazardous substance over an extended period of time.

**Cleanup:** The implementation of a cleanup action or interim action.

**Cleanup action:** Any remedial action, except interim actions, taken at a site to eliminate, render less toxic, stabilize, contain, immobilize, isolate, treat, destroy, or remove a hazardous substance that complies with cleanup levels; utilizes permanent solutions to the maximum extent practicable; and includes adequate monitoring to ensure the effectiveness of the cleanup action.

**Cleanup action plan:** A document which selects the cleanup action and specifies cleanup standards and other requirements for a particular site. The cleanup action plan, which follows the remedial investigation/feasibility study report, is subject to a public comment period. After completion of a comment period on the draft cleanup action plan, Ecology issues a final cleanup action plan.

**Cleanup level:** The concentration of a hazardous substance in soil, water, air, or sediment that is determined to be protective of human health and the environment under specified exposure conditions.

**Cleanup process:** The process for identifying, investigating, and cleaning up hazardous waste sites.

**Consent decree:** A legal document, approved and issued by a court, which formalizes an agreement reached between Ecology and potentially liable persons on the actions needed at a site. A consent decree is subject to public comment and a public meeting is required. If a consent decree substantially changes, an additional comment period is provided. After satisfying the public comment and meeting requirements, Ecology files the consent decree with the appropriate superior court or federal court having jurisdiction over the matter.

**Containment:** A container, vessel, barrier, or structure, whether natural or constructed, which confines a hazardous substance within a defined boundary and prevents or minimizes its release into the environment.

**Contaminant:** Any hazardous substance that does not occur naturally or occurs at greater than natural background levels.

**Enforcement order:** A legal document, issued by Ecology, requiring remedial action. Failure to comply with an enforcement order may result in substantial liability for costs and penalties. An enforcement order is subject to public comment. If an enforcement order is substantially changed, an additional comment period is provided.

**Environment:** Any plant, animal, natural resource, surface water (including underlying sediments), ground water, drinking water supply, land surface (including tidelands and shorelands) or subsurface strata, or ambient air within the state of Washington.

**Exposure:** Subjection of an organism to the action, influence, or effect of a hazardous substance (chemical agent) or physical agent.

**Exposure pathway:** The path a hazardous substance takes or could take from a source to an exposed organism. An exposure pathway describes the mechanism (e.g., inhalation, ingestion, injection, absorption through skin or eyes) by which an individual or population is exposed or has the potential to be exposed to hazardous substances at or originating from a site.

**Facility:** Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly-owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, vessel, or aircraft; or any site or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located.

**Feasibility study (FS):** Provides identification and analysis of site cleanup alternatives, and is usually completed within a year. The entire RI/FS process takes about two years and is followed by the cleanup action plan. Remedial action evaluating sufficient site information to enable the selection of a cleanup action plan.

**Free product:** A hazardous substance that is present as a nonaqueous phase liquid (that is, liquid not dissolved in water).

**Ground water:** Water in a saturated zone beneath the surface of land or below a surface water.

**Hazardous site list:** A list of ranked sites that require further remedial action. These sites are published in the Ecology Site Register.

**Hazardous substance:** Any dangerous or extremely hazardous waste as defined in RCW 70.105.010 (5) *[any discarded, useless, unwanted, or abandoned substances including, but not limited to, certain pesticides, or any residues or containers of such substances which are disposed of in such quantity or concentration as to pose a substantial present or potential hazard to human health, wildlife, or the environment because such wastes or constituents or combinations of such wastes: (a) have short-lived, toxic properties that may cause death, injury, or illness or have mutagenic, teratogenic, or carcinogenic properties; or (b) are corrosive, explosive, flammable, or may generate pressure through decomposition or other means.]* and (6) *[any dangerous waste which (a) will persist in a hazardous form for several years or more at a disposal site and which in its persistent form presents a significant environmental hazardous and may be concentrated by living organisms through a food chain or may affect the genetic makeup of man or wildlife; and is highly toxic to man or wildlife; (b) if disposed of at a disposal site in such quantities as would present an extreme hazard to man or the environment.]*, or any dangerous or extremely dangerous waste as designated by rule under Chapter 70.105 RCW; any hazardous substance as defined in RCW 70.105.010 (14) *[any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the characteristics or criteria of hazardous waste as described in rules adopted under this chapter.]* or any hazardous substance as defined by rule under Chapter 70.105 RCW; petroleum products.

**Hazardous waste site:** Any facility where there has been a confirmation of a release or threatened release of a hazardous substance that requires remedial action.

**Independent cleanup action:** Any remedial action conducted without Ecology oversight or approval, and not under an order or decree.

**Initial investigation:** An investigation to determine that a release or threatened release may have occurred that warrants further action.

**Interim action:** Any remedial action that partially addresses the cleanup of a site. It is an action that is technically necessary to reduce a threat to human health or the environment by eliminating or substantially reducing one or more pathways for exposure to a hazardous

substance at a facility; an action that corrects a problem that may become substantially worse or cost substantially more to address if the action is delayed; an action needed to provide for completion of a site hazard assessment, state remedial investigation/feasibility study, or design of a cleanup action.

**Method detection limit (MDL):** minimum concentration of a compound that can be measured and reported with 99 percent confidence that the value is greater than zero.

**Mixed funding:** Any funding, either in the form of a loan or a contribution, provided to potentially liable persons from the state toxics control account.

**Model Toxics Control Act (MTCA):** Refers to RCW 70.105D. It was approved by voters at the November 1988 general election and known as Initiative 97. The implementing regulation is WAC 173-340.

**Natural background:** The concentration of hazardous substance consistently present in the environment which has not been influenced by localized human activities.

**National Priorities List (NPL):** EPA's list of hazardous waste sites identified for possible long-term remedial response with funding from the federal Superfund trust fund. There are currently 41 sites in Washington State officially designated as final NPL sites and 4 sites pending federal Superfund designation.

**Owner or operator:** Any person with any ownership interest in the facility or who exercises any control over the facility; or in the case of an abandoned facility, any person who had owned or operated or exercised control over the facility any time before its abandonment.

**Potentially liable person (PLP):** Any person whom Ecology finds, based on credible evidence, to be liable under authority of RCW 70.105D.040.

**Practical quantitation limit (PQL):** lowest concentration that can be reliably measured within specified limits of precision, accuracy, representativeness, completeness, and comparability during routine laboratory operating conditions, using Ecology-approved methods.

**Public notice:** At a minimum, adequate notice mailed to all persons who have made a timely request of Ecology and to persons residing in the potentially affected vicinity of the proposed action; mailed to appropriate news media; published in the local (city or county) newspaper of largest circulation; and opportunity for interested persons to comment.

**Public participation plan:** A plan prepared under the authority of WAC 173-340-600 to encourage coordinated and effective public involvement tailored to the public's needs at a particular site.

**Recovery by-products:** Any hazardous substance, water, sludge, or other materials collected in the free product removal process in response to a release from an underground storage tank.

**Release:** Any intentional or unintentional entry of any hazardous substance into the environment, including, but not limited to, the abandonment or disposal of containers of hazardous substances.

**Remedial action:** Any action to identify, eliminate, or minimize any threat posed by hazardous substances to human health or the environment, including any investigative and monitoring activities of any release or threatened release of a hazardous substance, and any health assessments or health effects studies conducted in order to determine the risk or potential risk to human health.

**Remedial investigation (RI):** Any remedial action which provides information on the extent and magnitude of contamination at a site. This usually takes 12 to 18 months and is followed by the feasibility study. The purpose of the remedial investigation/feasibility study is to collect and develop sufficient site information enabling the selection of a cleanup action.

**Responsiveness summary:** A compilation of all questions and comments to a document open for public comment and their respective answers/replies by Ecology. The responsiveness summary is mailed, at a minimum, to those who provided comments and its availability is published in the Ecology Site Register.

**Risk:** The probability that a hazardous substance, when released into the environment, will cause an adverse effect in exposed humans or other living organisms.

**Sensitive environment:** An area of particular environmental value, where a release could pose a greater threat than in other areas including: wetlands; critical habitat for endangered or threatened species; national or state wildlife refuge; critical habitat, breeding or feeding area for fish or shellfish; wild or scenic river; rookery; riparian area; big game winter range.

**Site:** The same as facility (see above).

**Site characterization report:** A written report describing the site and nature of a release from an underground storage tank, as described in WAC 173-340-450 (4)(b).

**Site hazard assessment (SHA):** An assessment to gather information about a site to confirm whether a release has occurred and to enable Ecology to evaluate the relative potential hazard posed by the release. If further action is needed, an RI/FS is undertaken. 173-340-320.

**Site Register:** Ecology publication issued every two weeks listing major activities conducted statewide related to the study and cleanup of hazardous waste sites under the Model Toxics Control Act. To receive this publication, please call (206) 438-3081.



**Surface water:** Lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the state of Washington or under the jurisdiction of the state of Washington.

**SWRO:** Ecology Southwest Regional Office in Tumwater.

**TCP:** Ecology Toxics Cleanup Program.

**Underground storage tank (UST):** An underground storage tank and connected underground piping as defined in the rules adopted under Chapter 90.76 RCW.

**Washington Ranking Method (WARM):** Method used to rank sites placed on the hazardous sites list. A report describing this method is available from Ecology.